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EXAMINER.

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To our Readers and Correspondents.

Beginning with Vol. XXXVII., July, 1878, the CHICAGO MEDICAL JOURNAL AND EXAMINER prints all records of length and weight in terms of the Metric System, and all records of temperature in degrees of the Centigrade Scale. The Metric System, legalized in the United States and Great Britain, is extensively or exclusively employed by other civilized nations, and has thus become an essential part of the international language of science. It is recommended for adoption to the profession in this country by the American Medical Association and other scientific bodies. To-day no physician can afford to be ignorant of its value, its simplicity and the meaning of its terms

The subjoined tables and scales, which have been kindly prepared for us by Prof. W. S. Haines, will be continuously reproduced in subsequent numbers of this journal, for the ready reference of our readers and correspondents.

Metric Measures of Length.

Millimeter	0.001	of a Meter	0.03937 inches.
Centimeter	0.01	" "	0.39370 "
Decimeter	0.1	" "	3.93707 "
Meter	**1.**	**Meter**	**39.37079** "
Decameter	10.	Meters	393.70790 "
Hectometer	100.	"	3937.07900 "
Kilometer	1000.	"	39370.79000 "

Metrical Weights.

Milligram	0.001	of a Gram	0.015 grains.
Centigram	0.01	" "	0.154 "
Decigram	0.1	" "	1.543 "
Gram	**1.**	**Gram**	**15.432** "
Decagram	10.	Grams	154.323 "
Hectogram	100.	"	1543.234 "
Kilogram	1000.	"	15434.348 "

☞ The United States "nickel" five cent piece weighs five grams, and is two centimeters in diameter.

Approximate Equivalent of Metrical Weights.

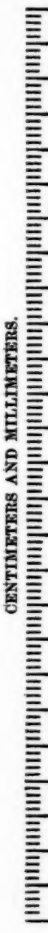
For Rapid Reference.

Milligrams.	*Grains.*	*Decigrams.*	*Grains.*
1 (written 0.001 or |001)*	1/65	1 (written 0.1 or |1)	1 1/2
2	1/32	2	3
3	1/22	3	4 1/2
4	1/16	4	6
5	1/13	5	7 1/2
6	1/11	6	9
7	1/9	7	11
8	1/8	8	12 1/2
9	1/7	9	14

Centigrams.	*Grains.*	*Grams.*	*Grains.*
1 (written 0.01 or |01)	1/6	1 (written 1. or 1|)	15
2	1/3	2	30
3	6/13	3	46
4	7/11	4	61
5	3/4	5	77
6	9/10	6	92
7	1	7	108
8	1 1/4	8	123
9	1 1/3	9	139

A Kilogram—2 1/5 lbs. Avoirdupois.

* The decimal *line* instead of points makes errors impossible.



Metric Fluid Measures.

When using the metric system, fluids are preferably prescribed by weight, employing the gram, its multiples and subdivisions, just the same as with solids, thus avoiding the errors due to refraction, adhesion, and inaccurate measuring vessels. For practical purposes four grams of water may be regarded as equivalent to a fluid drachm of that liquid, and the same may be considered true of tinctures and infusions; syrups, on the average, are about one-third heavier than water, so that a fluid ounce of a syrup will be approximately represented by 43 grams.

If preferred, however, fluids may be prescribed by volume in the metric, just as in the present system, using for that purpose the *Cubic Centimeter*, that is, a volume represented by a cube all of whose sides measure one centimeter. An ordinary back-gammon die is usually about this size. One cubic centimeter (written 1 C. C.) = 16.231 minims. It is approximately regarded as one fourth of a fluid drachm.

Approximate Equivalents of Cubic Centimeter.

0.001	C. C.	=	$^1/_{65}$ minim.
0.01	"	=	$^1/_6$ "
0.1	"	=	$1^1/_2$ "
1.	**C. C.**	**=.....**	**15 minim.**
4.	"	=	1 fluid drachm.
16.	"	=	4 fluid drachms.
32.	"	=	1 ounce.

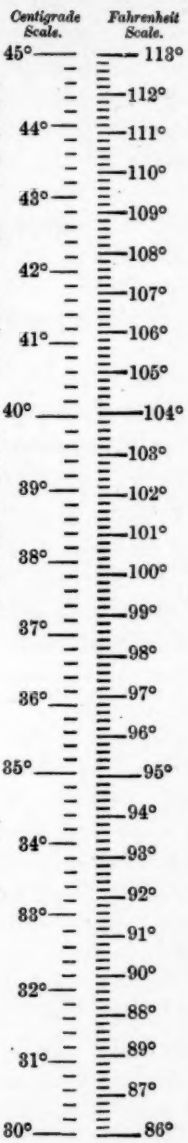
1000 C. C. (usually known as a **Liter**) is a trifle more than one quart, wine measure.

The following prescription—

R: Potassii bromidi, ℥i.
Elixir aurantii, fl., ℥viij.
M.

Would, in metric terms, be written:

Potassic bromide, 32
Orange elixir, 250
Mix.



Original Communications.

THE PIGMENTARY SYPHILODERM.

By I. Edmondson Atkinson, M. D.,

Physician to the Baltimore Special Dispensary.

(*Read before the American Dermatological Association, at Saratoga Springs, N. Y., Aug. 27th*, 1878.

Before presenting the cases whose histories form the basis of this paper, I may be pardoned for briefly reviewing the characters of the lesion of which I desire to speak.

In describing "syphilide pigmentaire" for the first time in 1853, Hardy ascribed to it peculiarities separating it from all other syphilodermata upon the one hand, and upon the other from the various forms of non-specific pigmentary abnormalities of the skin. The very lucid and faithful account of the symptoms of this lesion given by this author, has been supplemented by other writers, but has more especially received support from the pen of Fournier (Leçons sur la Syphilis etudiés plus particulièrement, chez la Femme, 1873, p. 422). According to these authors, the pigmentary syphiloderm may appear from the fourth month to the end of the second year of the disease, and is consequently one of its later secondary manifestations. It is observed almost exclusively in the female sex, occupying preferably the skin of the neck (29 times in 30, Fournier), although occasionally met with upon other portions of the body. Its symptoms are, briefly, as follows: Upon the neck, more commonly upon its lateral surfaces, appear, with or without concomitant symptoms, but invariably subsequent to other manifestations of general syphilis of other parts of the body (roseola, papules, mucous patches, adenopathies, etc.), faintly

colored spots, varying in size from that of a split pea to that of a finger nail, which rarely remain discrete, but rather run together, being connected by more or less narrow bands of similar discoloration, and forming an extent of pigmented surface resembling a clumsy network whose meshes are represented by areas of normal skin, or following Hardy and others, of skin whiter than normal (Leçons sur la Scrofule et les Scrofulides et sur la Syphilis et les Syphilides, 1864, p. 175). The color of the pigmented area is of a very faint grayish-yellow, a café-au-lait color, paler than that of tinea versicolor or than that of chloasma uterinum. Fournier compares the effect to the dirty necks of uncleanly people. It is uninfluenced by pressure.

The borders of the patches lose themselves more or less imperceptibly in the healthy skin. Their surface is smooth, absolutely without desquamation, not at all elevated above the general surface, giving rise to no subjective symptoms, and quite rebellious to treatment, whether anti-syphilitic or otherwise, enduring for months—it is even said for years.

Such, then, being a general outline of this lesion, I propose to offer the following cases as illustrating it, before proceeding to discuss the claims upon which it rests its position in the nosology of syphilis.

Case 1. Hannah F., white, 17 years old, unmarried, of medium size and complexion inclining to brunette, with dark hair and eyes, came to the dispensary June 10th, 1875. She said that during the previous summer she had had suppurating buboes in both groins (the scars of which are at present visible). Shortly after this she had sores upon her vulva, and five months ago an eruption first came upon her skin. Upon examination, her labia majora and minora were found to be very œdematous and infiltrated from the irritation of numerous mucous patches, which also extended along the perineum. Over her thighs and abdomen were the stainings left by a previous syphilitic eruption. Mucous patches were present upon the faucial mucous membrane. There was a general adenopathy, especially marked in the cervical region. Distributed over the neck and shoulders, and extending over the deltoid region of the arms quite symmetrically, were, what appeared upon superficial examination to be spots of

abnormally whitened integument, scattered irregularly and discretely over the surface. Upon more rigid examination, these spots, which did not exceed from six to twelve millimeters in diameter, were seen to be not whiter than normal, the true alteration being evidently in the surrounding portions of the skin. This alteration consisted of pigmented spots extending over the front and sides of the neck and shoulders, and connected with each other uninterruptedly, except where the patches of normal skin seemed to be inserted, forming the network-like appearance characteristic of the eruption. This maculation, which resembles in coloration a faint chloasma uterinum, is less pronounced than that of tinea versicolor, and also differs from that following the ordinary syphiloderms, being paler. The surface was perfectly smooth and free from desquamation. There was no itching. The patient was, however, much mortified at the dirty appearance of her skin, which, when first noticed by her a short while ago, was just as at present. She was of careful, cleanly habits, and was quite sure that there had been no alteration in the appearance of the eruption since it was first noticed. She was subjected to an appropriate mercurial internal and external treatment, which was followed with considerable regularity. Upon July 24th, it was noted that the treatment had effected the disappearance of all the mucous patches except one at the fourchette, and that the labia were becoming much less infiltrated. The maculation about the shoulders and neck persisted, though fainter. She was under treatment steadily until August 11th, the maculations becoming fainter, and general improvement being steadily experienced. She was not seen again until January 25th, 1876, when she informed me that she was married and three months pregnant. Upon examination, she appeared quite well, the infiltration of the labia having quite disappeared, as well as the maculations upon her neck and shoulder. She did not again come under observation.

CASE 2.—June 19th, 1877, Becky H., a young prostitute, born in Pennsylvania, 19 years old, of moderately fair complexion, with blue eyes and light hair, and of healthy appearance, applied at the dispensary to be treated for a vaginal discharge of three weeks' duration. She said she had had a similar

discharge during the previous January. Upon physical examination, the integument of her abdomen and chest anteriorly, and of her thighs, was well sprinkled with a fading roseola. There were no signs of an ulcer upon the genital organs, but there was a painless inguinal adenopathy. She was kept under close observation until July 7th. She re-applied October 23rd, complaining of pharyngeal mucous patches, but without any cutaneous eruption. December 8th. The mucous patches which had healed, had now returned. December 29th. Having now been at least seven months syphilitic, it was now noted that upon both sides of her neck, arranged with tolerable symmetry, were a number of faintly brownish spots, similar in coloration to those of the previous patient. They were limited to the sides of the neck, and did not *inclose* unpigmented areas, not being connected so as to form the usual network. She had been almost constantly under my observation, and neither she nor I had observed a previous eruption upon these parts. She quite decidedly denied that any such had been present. There were no subjective symptoms, and the spots were smooth, unelevated, and not desquamating. Their margins were not very well defined. By February 19th, the maculations were much fainter, but had undergone no change in distribution. March 3rd. There had been for several days a right iritis. The maculations had not diminished in size or configuration; they had simply faded, and more nearly approached the normal hue of the skin. During all this period, the patient was almost constantly undergoing a mercurial treatment. She has not again come under observation.

My third case was an anomalous one in several particulars, and I have hesitated before including it with cases of pigmentary syphiloderm, having never seen a similar condition; but upon reflection I am unable to assign it to any other form of syphilitic eruption than the one under consideration. It is as follows, viz.:

CASE 3.—Annie J. came to the dispensary October 10th, 1875. She was a light mulatto, 18 years of age, and of a moderately healthy appearance. At the posterior commissure of the labia minora there was a soft spreading ulcer, accompanied by indolent inguinal adenopathy. She had, also, some sore

throat, enlargement of the cervical glands, and complained of pains in the arms and sides. No reliable history could be obtained, although it was evident that the lesions were of some duration. The sore was cauterized with the acid nitrate of mercury. She did not again appear at the dispensary until March 28th, 1876, five months after her first appearance. She then said that her eyes had been troubling her for about two months. This was found to be due to a double iritis; and there was a small perforation of the left cornea, through which the iris slightly protruded. Upon the thighs was a fading papular eruption. Upon the dorsal surfaces of the hands and wrists, and upon the inner and extensor surfaces of the knees, were very symmetrically arranged mottled appearances, resembling, when seen at a distance, old scars from burns, but really due to pigmentary changes alone. According to her, they had been present nearly all winter. As in my first case, my first impression was that the lighter-colored islets were the affected portions, but a moment's careful examination served to correct this error. These areas, which varied in size from five to fifteen millimeters in diameter, were of the color of the normal skin, and only appeared lighter by contrast with the surrounding darker surface, which was almost black, and extended continuously, the different spots being connected by narrow bands, and forming the lace-like arrangement already spoken of. The borders were abruptly margined. The normal café-au-lait color of the general surface contrasted strikingly with the hyper-pigmented portions, the general effect seemingly justifying the term piebald in describing it. No other portion of the skin was similarly affected. She was last seen May 31st, when, after taking cod liver oil and the syrup of the iodide of iron, she was much better. The maculations had faded from her hands, but were still present upon the inner surfaces of both knees.

The pigmentary changes of which the foregoing cases afford examples are so unfrequently observed that many writers have been led to deny that they are to be considered direct results of syphilis. The insignificance of the symptoms, and the probability of its being frequently overlooked must, however, be considered. Dr. G. H. Fox, who, however, regards the lesion as a

vitiligo, very properly draws attention to this point (*Amer. Journ. Med. Sciences*, April, 1878), and thinks that it will much more frequently be observed, when searched for, even in the male sex. On the other hand, there is danger that there may be committed the error of including with the pigmentary, syphiloderm, lesions of variously different origins. These are principally the chloasmata, chloasma uterinum, and chloasma cachecticorum, and the stainings left behind by a roseola syphilitica. (It is hardly necessary here to refer to the danger of confounding tinea versicolor with the pigmentary syphiloderm, since the points of a differential diagnosis are always at hand in the presence of a parasite in the desquamated epidermis of the former.) The ordinary chloasmata may usually be distinguished by attention to their color, distribution and configuration, as well as to the constitutional conditions of the patients. Their color is usually darker; they are more uniform in their distribution, not inclosing the mesh-like spaces, and are most rarely confined to the neck, the favorite seat of the lesion under discussion. (The chloasma that is seen frequently in old syphilitics, is simply due to the cachexia, and is altogether unlike the truly syphilitic form.)

The stainings left behind by a syphilitic roseola, to my mind, more nearly approach, in their characteristics, the pigmentary syphiloderm, than any other form of lesion. It is not at all uncommon to see upon the abdomen especially, tracts of hyper-pigmented skin inclosing circular areas of normal color. These tracts are the remains of syphilitic roseola; but here, however, there is usually the clear history of a preceding hyperæmia, the hyper-pigmentation is much more extensive, and its duration much less prolonged. The especial point of distinction, however, is that the pigmentary syphiloderm appears independently of any preceding hyperæmia, according to the almost universal opinion of those who have observed it, and to the unanimous opinion of the patients. Until convincing clinical proof of the necessary pre-existence of this hyperæmia is produced, those who believe in the reality of this syphiloderm are entitled to hold to their faith.

There are others who, recognizing the fact that the pigmentary

deposits are not due to preceding hyperæmia, consider the non-pigmented areas, or, as they claim, the whitened patches, to be the seat of the true morbid process, and that the lesion is a pigmentary atrophy of the inclosed spaces, around which there is an increased deposit of pigment, as is usually the case in acquired leucoderma.

It is true that some writers, as Hardy and Drysdale, while considering the hyper-pigmentation to be the essential lesion, also think that these inclosed spaces contain less coloring matter than normal; and admitting that this occasionally is the case, it becomes possible, in a narrow sense, to designate such condition as leucodermatous. But in doing this we simply beg the question, since the transient and always very limited blanching, is invariably accompanied by a hyper-pigmentation always equaling, almost always exceeding, it in extent, and which has at least equal claims to be considered the essential lesion. I think it especially unfortunate that Dr. George H. Fox, who has most ably expressed his view of the leucodermatous nature of this affection, should have used the term vitiligo to designate it, a term that has been pretty generally applied to that form of lesion where there is a permanent, complete and usually progressive centrifugal disappearance of cutaneous pigment. It is true that Dr. Fox is unwilling that vitiligo should be thus restricted in its meaning, but nevertheless, in describing it, he quotes Dr. Duhring's definition of the condition, which certainly has reference to a definite, progressive and permanent loss of pigment.

It may be properly objected to the view that the supposed leucodermic patches occupy the sites of previous hyperæmic eruptions, that it is the positive opinion of other writers, based upon their personal experience, that the pigmentary syphiloderm as observed by *them*, has never succeeded upon the site of an antecedent eruption. The leucodermatous condition, moreover, is certainly not present in all cases, and it is a fact, as observed by Hardy, and evidenced in my second case, that the hyper-pigmented spots may occur without including islets of normal or whitened integument.

The resistance offered by this lesion to the influence of anti-syphilitic remedies, undoubtedly affords their most efficient

weapon to those who combat the doctrine of its syphilitic nature. It is, for example, argued that all syphilitic alteration, especially those of the earlier constitutional periods, are promptly antagonized by the administration of mercury, and that the hyper-pigmentation under discussion, not being modified by this drug, cannot be a syphilitic manifestation. Such a conclusion is based upon incorrect ideas of the nature of the pigmentation. The pigmentary changes following the earliest syphilitic symptoms are always due to the pre-existing hyperæmia—their duration and intensity are usually proportioned to the duration and character of the hyperæmia, and they are principally deposited in the connective tissue of the corium, in the region of the vascular distribution. The rationale of pigmentation is too little known, but we do know that pigment disappears readily after the recession of a hyperæmia of short duration, while after an old eczema or chronic ulcer, it may remain for many years. Why this is so, is not known. It is a matter of universal clinical experience that the pigmentations following the early syphilitic eruptions are but little disposed to become permanent, and are readily re-absorbed. With the pigment substance of the epidermis, on the contrary, the case is different. Here the hyper-pigmentation may readily occur quite independently of hyperæmia, and is due to an increase of the melarin, the physiological pigment of the skin.

It is a matter of general experience that the non-vascular hyper-pigmentations are provokingly obstinate, and beyond the reach of internal medication. No one can explain why the different cachexiæ, or why uterine disorder should induce a hyper-pigmentation in the rete malpighii. There is no reason why the syphilitic dyscrasia, as distinct from any cachectic condition, may not equally evoke similar pigmentary changes, and with the light thrown upon the subject from time to time by corroborative cases, I have no hesitation in saying that it does evoke them, and venture to suggest that they may be amenable to the same therapeutic agencies.

INFLAMMATION.

By Wm. A. Atkinson, M. D., D. D. S., New York.

(*Read before the American Dental Association, Aug.* 8, 1878.)

The gradual growth to higher and better interpretations of the phenomena of inflammation, as displayed in the works of John Hunter, Virchow, Remak, Billroth, C. O. Weber, von Recklinghausen, Conheim and Stricker, not to mention many others, are proofs of the want of complete satisfaction with which each has looked upon the labors of his predecessors and co-workers, as well as upon his own efforts.

Till this day it is impossible for the best observers to designate the point at which physiological activity becomes pathological. It is at least an entertainable proposition that some of the normal operations attendant upon the ripening of ova and spermatozoids are properly classifiable as inflammatory activities.

Histological research has shown the "corpus luteum" to be composed of scar tissue, of a like character with scars resulting from traumatic and inflammatory lesions. Excess of blood plasm in any locality is liable to be converted into embryonal corpuscles or mucous globules, as the indifferent basis from which normal and abnormal products arise, according as the environment tends to lead to one or the other. Simple hyperplasia tends to increase of the normal tissues. When the blood tracts are obstructed, and the press of the currents great, stasis, exudation and retrogressive molecular changes take charge of the exuded blood plasm, and convert it into the products of the inflammatory process, which this retrogressive metamorphosis constitutes.

Late histological discoveries strongly indicate that nerve currents and blood currents are necessary conditions to allow inflammation of any territory. All those territories therefore that are not supplied with blood circulation and nerve currents, if unaided by adjoining currents, are incapable of inflammation and of repairing their wounds when traumatically induced. When the neural and vascular currents are coëtaneous and unobstructed,

it is doubtful if any mere acceleration could result in the inflammatory process, but when the heart's action is too great to exactly balance the tonicity of the capillaries supplied by the nerve currents, obstructions are readily induced in the tortuous channels of the capillary system.

To prevent the inevitable advent of inflammation under such circumstances, the obstructions must be removed, and the simultaneousness of nerve currents and blood currents be regained. The simplest method of accomplishing this desirable end will be to call the part into vigorous exercise by voluntary or involuntary effort of the subject, or by "massage," or the manipulation of another person. The only reason why all inflammations might not thus be successfully treated depends upon our inability to recognize the departure from health at this early stage, and to get at the locality.

Swelling, redness, heat and pain have universally been grouped together as the definition of the inflammatory process. No one has put on record even an approach to legitimate, clear and satisfactory statement of the precise difference between normal nutrient function, and its derangement called inflammation.

Let us examine the process of conversion of pabulum (protoplasm) into the elements of tissue, and learn if we may, that pleasure and pain, health and disease, are qualities or modes, and quantities or measures of functional activities that vanish into each other by disturbing and restoring the balances of regular molecular changes. To comprehend these we must cognize the existence of atoms of which the molecules are composed; and to understand the manner of the coming together of the atoms to construct the molecule, we must take into consideration the static and dynamic aspects of the atoms, no less than the awakening and engagement of the definite measures of energy that effect the combinations. Why? and how? the molecules move, are the two questions the exact replies to which shall reveal to us the complete explanation of all functional movements, and declare how they are produced and maintained or destroyed in functioning bodies.

Pain is the result of obstructed sensory nerve current; *swelling* supervenes upon obstructed vascular current; *heat* is resultant upon obstructions in the neural and vascular channels by

which the mechanical movements of the masses of nerve blood and vascular blood (through impact against the points of obstruction) become changed into molecular movement which we cognize as *heat*. These three, viz., pain, swelling and heat, are the only essential factors or necessary concomitants in the process of inflammation. The redness that has heretofore been made an equal factor, is a mere incident, as is proved by the fact that some swellings are white.

What are we to understand by quality or mode, and quantity or measure of function? And how are we to differentiate these predominant aspects of the complex presence we call function of mind and function of body? The function of mind consists of seriated arrestations and releases of the tensions of consciousness, or the power of perception. The functions of body are also seriated successions of arrest and release of tensions of combinations and separations of molecular and atomic bodies, through which the energy operates to produce molecular, granular, corpuscular, tissual, organic and systemic forms of function in their various manifestations.

Late works on chemistry assert that heat is given out or produced by combinations of atoms, and is taken up or quenched by separations of atoms. Works on physics tell us that "heat is a mode of motion," and that "mechanical motion upon being arrested is converted into molecular motion, which is heat." How then are we to account for the heat set free upon the admixture of sulphuric acid and water? How does the friction produce the heat so largely by the mere rushing of the molecules of water among the molecules of acid?

The partially engaged, unsatisfied or sleeping bonds of affinity belonging to the atoms in the molecules of water and acid are in a state to be easily aroused into active motion by any impact of current within the sphere of influence, be it direct or oblique, simple or manifold in its advent. We understand the diffusion of water-molecules and acid-molecules to result from the desire to attain equi-distance from each other in the mass of fluid; and the rush to acquire that tension effects the awakening of the sleeping bonds of energy, which being set in motion, manifest the intense measure of heat always attending this experiment.

The difference between this process of disengagement of heat and that form attendant upon the inflammatory processs in animal bodies, consists in the greater complications of engagements and disengagements of bonds of affinity in the molecular mass in which these changes occur; and the greater freedom of the fluid in the vessel of the chemist, as compared to the confinement of molecular mass in the tissual interspaces of animal organisms. There is also a larger number of elements entering into the molecular mass which is the basis of all animal forms of metamorphosis, than in the mass composing the vegetable or mineral examples of molecular aggregations. Hence the increased opportunity for the display of greater varieties of molecular changes that split up and minify the thermal and other currents possible to this limited territory.

There is such a thing as having the receptacle of molecular mass so packed with molecules as to preclude any motion among them. This has been proven by the stoppage of fermentative action by the pressure of a given number of atmospheres. Take the example of a fermentable substance placed in an air-tight transparent vessel, exhaust the air by the air pump, and then inject into the receptacle a quantity of yeast taken from the tub fresh and active. At first bubbles of carbon-di-oxide (carbonic acid gas) will break and rapidly disperse into the vacuum above the yeast, and there being no free oxygen present to support the fermentation, molecular change ceases to appear. Now admit pure oxygen in a small quantity, and the fermentation is again set up with increasing activity, in the ratio of the quantity of oxygen supplied up to a given measure. So soon as the tension or pressure of the incoming current of oxygen shall interfere with the freedom of the oxygen molecules in the space above the yeast, the activity of the fermentative change gradually lessens by degrees and finally ceases altogether. When the compression of the oxygen is great enough to arrest the motion of the oxygen molecules, they assume a static condition, preventing further changes between the oxygen and the hydro-carbons of the yeast. The yeast in the vessel is now in the condition of a "pop-bottle," or a bottle of "mineral water," fully charged with carbon-di-oxide. All that is requisite to re-establish the fermenta-

tive activity is to take off the pressure from the gas above the yeast in the vessel by giving it vent, so that the molecules of oxygen may be free to move among each other again, and then the attraction between the oxygen and the carbo-hydrates of the yeast mass is at once set vigorously at work, generating molecules of alcohol and carbon-di-oxide out of the already existing albumen, glucose or diastase in it.

The alternate combination and separation of atoms to construct the varieties of molecules in the mineral, vegetable and animal primates of bodies, is repeated and amplified, magnified and minified, by the necessities of the types of the individual presence in the various crystals, cells and corpuscles that are the characteristics of the three kingdoms known to exist as planetary presentments. A serial order of appearance and disappearance (or coming from without and passing beyond the range of our sensuous perception) pertains to the origination, growth and decline of every example of individual body or class of bodies, be they mineral, vegetable or animal. The chaotification of these gives the foundation from which all human functional capabilities originate; so to understand all the activities possible to human bodies, we must become acquainted with the activities of the whole universe of which man is the epitome.

"The whole is equal to all its parts" is an aphorism in the study of inflammation as true as it is in mathematics, astronomy and physics. The combustion of hydrogen and carbon with oxygen is well known to produce *heat*. Friction also produces heat to the degree of ignition of combustible substances. Are we not then justified in assuming that the heat of fever and inflammation is also the product of combustion and friction? And does not this indicate that whatever prevents or arrests combustion will also arrest fever and the inflammation upon which it depends? The difference between fever and abscess is the difference between the combustion in a charcoal pit and in an open fire. The first extracts the hydrogen from the combustible substance, and leaves the particles of carbon in their undisturbed position in the charcoal or the coke; the second oxidizes the carbon and hydrogen, converting them into carbon-di-oxide and water, both

of which conspire to change the mineral constituents of the wood or coal into the salts of which their ashes are composed.

If we desire to understand just what fever and inflammation are, we must comprehend the process of combustion. Combustion is the undoing of the work of the sun which constructs mineral, vegetable, and animal tissues. How does this occur? Simply by the influx of an energy that enables the oxygen to disrupt the bonds of affinity which "clamp" the atoms in the molecules; and the formation of other molecules by the use of these "clamps" in a different order of engagement of bonds. * * * * * * * Multivalent atoms are those which have many bonds engaged. We may conceive that these are placed in the "center," or "skeleton," or "nucleus" of the molecule around which the atoms having few (2 or 3) bonds engaged, are distributed in a variety of ways as its flesh. This variation of the "skeleton" and "flesh" of the molecule is the measure of the differentiation among proximate principles. Slow oxidation of moist organic substances, especially those containing nitrogen, gradually consumes without sensible elevation of temperature. This has been called "eremacausis," (or burning by slow degrees.) Fermentation and putrefaction are both examples of oxidation also, but with sensible elevation of temperature.

Fermentation is distinguished by giving off no offensive gases, and by producing useful compounds. Putrefaction is characterized by the exhalation of offensive and deleterious gases. * * *

By this play of affinities, under the direction of the demands of the types of all forms of molecules composing human protoplasm, we have the elaboration of all the proximate principles belonging to the tissues of the human body, embryonal and adult, of a healthy or diseased character. Just how it is that the changes of position of molecules effect difference in the proximate principles of protagon, neurine, myeline, mucine, olein, margarin, cholesterine, cerebrin, lecethin, and a host of others (insolable, real and hypothetical bodies, nevertheless veritable radicals of the deciduous and permanent tissues of the body) is not just yet demonstrable without great labor with expensive apparatus.

But we do know and can demonstrate that tensile strength belongs to fluids as well as solids (if not to gases also). Bubbles on

pure water prove the tensile strength of H^2O to be a fact which is more easily displayed by adding soap or other viscous substance to the water, after which bubbles of large size and great strength may be formed, which retain their shape long enough to permit elaborate inspection. Another proof of the tensile force of water may be shown by pouring it from a perforated vessel on a smooth pool, when many spherules will be seen to roll over the face of the placid sheet for some time before melting into its body. It is said a stratum of air intervenes between the drops and the pool—but what enables each drop to maintain its sphericity if it be not the tensile strength of the water?

The rushing of the molecules of protoplasm under the stress of the inflammatory process has many degrees of rapidity, hence the variety of the so-called products of this process. It may be affirmed that the first degree results in *pus*—a simple, inoffensive body of dead blood, fluid and corpuscular. The second degree is *sanies*—an offensive, decomposing mass of dead blood, evolving sulphuretted hydrogen. The third degree is *ichor*—a yet further disintegration of blood, mixed with dissolved and rotten tissues, soft and hard. All that follows in this disgusting recapitulation (of demoniac possession) is the complete subversion of physiological dominion by chemical control of the elements of flesh and bone. * * * * * *

How do we subdue fire? First, by cutting off the supply of fuel; second, by quenching the flames. How is this last best accomplished? Not by water, unless it be sufficiently abundant to flood the whole body of the combustible on fire, but by enveloping the whole mass in a sheet of carbon-di-oxide or any fluid or vapor having no affinity for oxygen, or into which oxygen does not enter as a constituent. Where the fire is well kindled in an obscure building or part of a structure, it may be wise to isolate that locality and allow the fire to burn out. Just so in local inflammations in territories that can be cut off, preventing contamination of the whole system, it will be wise to ligate or compress the channels of neural and blood supply, until by thus establishing physiological rest, the morbific form of metamorphosis is arrested. Afterward normal nutrition may be depended upon to

spontaneously take charge of the territory upon the re-entrance of nerve and blood supply.

Paronychia ("run-round") which is an acute inflammation, has often been aborted by persistently plunging the finger into lye of wood ashes at the boiling point, dipping it in and out at intervals of a few seconds, until the nerve currents and blood currents were so controlled as to discontinue the pain and swelling.

Whenever this method is vigorously and persistently pursued a rapid cure is attained. Even that terribly painful periosteal inflammation called felon, may be aborted, or cut short, by tightly bandaging the finger or thumb. To be sure some pain may follow this method, but it is better to pursue this course, even though no anæsthetic be used to bridge the period, than to let it run its own course to full suppuration. The safest anæsthetic to use in such cases is ice or ice and salt, to produce numbness of the part until the retrogressive metamorphosis may be controlled. Evaporating lotions of various substances are worthy of trial, one of the best of which is common ether (falsely called sulphuric ether.) Rhigoline is also efficient. * * * *

Depletion by diaphoresis, catharsis, or phlebotomy coupled with nauseants pushed to the accomplishment of the purpose (viz.—arrest of inflammation) are methods within the reach of all, and absolutely harmless in the hands of ordinarily intelligent patients and practitioners. Bandaging answers a valuable purpose in our efforts to produce physiological rest of inflamed territories. Strips of sheet rubber, judicially applied, are excellent means to drive back the excess of blood in the extremities. In cases of bruises, or loss of tone of the capillaries from any privation of nerve currents inducing sugillation, such as the petechia (or flea-bite) of low forms of fever, the application of a succession of layers of contractile collodion is an admirable means of removing the blood from these extravasated spots and from the congested capillaries. Eruptions of all sorts that appear as pimples if left to themselves, may be successfully treated by the use of collodion applied in the manner indicated, and faithfully renewed whenever it cracks, until the danger to the face, neck and exposed portions of the skin, is past.

With these principles and remedies, and methods of applying

them, coupled with a little common sense and entire control of the patient, no one is justified in allowing inflammations to run their natural course, as is the almost universal practice among general and special surgeons.

A MODIFICATION OF THE STYLE.

S. O. Richey, M. D., Chicago.

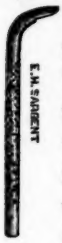
It is unnecessary to reiterate recognized facts with regard to the persistence of inflammation of the lachrymal sac and the nasal duct, and the obstinate resistance of strictures of the duct, to treatment. Forcing water through the passage is a method which, in some cases, has given good results, but chiefly in those in which the obstruction is due to inflammation of short duration. When structural changes have taken place in the duct with the formation of strictures, the treatment just mentioned is of small value, and more radical measures are called for.

The frequent passing of probes to dilate the strictures generally produces so much irritation as to keep up the trouble. The hollow style has enabled us to obtain better results by keeping open the passage, while it adds to the patient's comfort by allowing the tears to pass in the direction of their natural channel. When the style occupies the duct there is no chance of forcing any fluid through the duct itself by the side of the tube, and therefore, to treat the lining membrane of the sac and duct, the instrument must be partially or wholly removed, that the canal may be washed out, and the applications made.

The withdrawal and replacement of the style has much the same effect as passing the probe, and the object of the present modification is to obviate the necessity for removing it frequently, while by means of a small syringe it may be cleansed, and the requisite application made to the affected surface.

The change which I have made consists merely of numerous perforations, allowing free communication between the inside and the outside of the tube, thereby exposing as much as possible of the lining membrane of the canal while the style is in position.

Sufficient only of the metal forming the tube is left to maintain the required shape of the instrument, and thus to preserve the dilation of the strictures.



The wood cut represents a style the size of No. 8, Bowman's probe; its usual length is about 3.33 centimetres. The perforations answer a double purpose, viz: they permit any secretion from the membrane to pass into the tube, whence it may be washed into the nostril, thus preventing its accumulation in the sac and duct, and the irritation which its presence there would naturally cause; they permit the medicated fluid to reach the membrane, which has already been freed from the secretion; both of which objects may be accomplished without withdrawing the style. After a little practice the patient may be able to perform the service for himself, which is a special advantage, when he can not remain constantly under the supervision of the surgeon.

The style may be made to correspond in size with any of Bowman's probes, from No. 5 to No. 8, inclusive, and may be procured of Sargent & Co.

THE NECESSITY OF MORE HEROIC TREATMENT IN CASES OF LUMBAR ABSCESS.

By Edmund Andrews, A. M., M. D.

(Professor of Surgery in the Chicago Medical College.)

The condition of surgical literature on the subject of lumbar abscess is a disgrace to science. Saying nothing of spinal disease, a frequent cause of lumbar abscess, in discussing which our standard authors show an astounding ignorance of the present state of orthopedic surgery, let us pass on to the operative treatment of the abscesses themselves. In this department the surgical authorities are in utter and hopeless contradiction, and what is worse, where they find themselves destitute of a solid scientific basis for their opinions, many of them have not the manliness to acknowledge the situation, but emit a perfect fog of loose and random opinions to cover their ignorance.

Science above all things should be candid and truthful. When shall we have a body of savants who will not only state what they know, but will in humility and honesty acknowledge what they do not know?

In respect to the opening of lumbar abscesses, Sir Astley Cooper advised to evacuate them with valvular incisions from time to time, keeping them carefully closed between the operations. This was to avoid the decomposition of the pus with the consequent hectic and pyæmia which follows so frequently where the incision is left open. Chelius and Lawrence agreed with Sir Astley, Dupuytren advised not to open them at all, but to let them break spontaneously. Abernethy advocated the plan of valvular incision. J. S. South advised to wait until the abscesses were just about to burst spontaneously, and then to open them with a small puncture, leaving them open for gradual evacuation.

Gross declares that these abscesses all spring from carious vertebræ, contrary to the opinion of the rest of the profession. He says there is little or no hope of cure or benefit by any known local surgery, and therefore he very honestly omits to recommend any. He has no faith in antiseptic plans.

Erichsen says, wait until the abscess is about to burst spontaneously, and then evacuate it either by a valvular incision, by aspiration, or by Lister's antiseptic plan.

Ashurst, of the Episcopal Hospital, Philadelphia, says, do not open them at all, but let them burst spontaneously; but if you insist on opening them, use Lister's antiseptic plan.

Bryant, of London, says, open early and freely on the antiseptic plan.

Gant, of the Royal Free Hospital, London, advises to wait until the abscess is ready to burst, and then to evacuate it with a valvular incision, and close it again.

Frank Hamilton, of New York, directs first to invigorate the general health with tonic treatment and then to open the abscess, but to use no antiseptic injections, drainage tubes, tents nor even probes; at least not until it has been discharging for some weeks.

Callender, of St. Bartholomew's Hospital, London, says, open early, insert drainage tubes as far in as possible, and inject

antiseptics at once, using pressure to make the fluid penetrate the remote parts of the sac.

Holmes, of England says, allow the abscess to burst spontaneously.

Heath and Owen, of London, direct to open it, insert a drainage tube, and use antiseptic injections under pressure.

Druitt counsels opening from time to time with small punctures and reclosing them.

Lister, late of Glasgow, now of Edinburgh, advises to open the abscess and to use drainage tubes, with antiseptic injections and dressings.

From this melange of contradictions the practical physician and surgeon is expected to evolve a rational plan of treatment, and it is no wonder that some, like Prof. Gross, give it up as an insoluble conundrum.

But there is no need of this confusion of ideas. Some truths in surgery are irrevocably settled and they are just as applicable to lumbar abscess as to similar collections of pus elsewhere, only they need a little more heroic energy in their use.

First. We all know that large collections of pus undergo a disastrous putrefaction if they are opened to the external air, and that hectic, fever and fatal pyæmia are prone to follow at once.

Second. If this opening is made so as not to admit the septic germs of the atmosphere, or if antiseptic injections and dressings are faithfully used, the evacuation is usually free from danger.

Third. Drainage tubes, when efficiently used, prevent the contraction of the outlet, allow free evacuation and admit of efficient antiseptic injection, and when such injections can be made to bathe the whole interior of an abscess, they will almost invariably stop the suppuration with its whole train of disasters.

Callender, of London, recognizes the truth of these principles and has applied them to some extent to lumbar abscesses, as have also, Heath, Lyster and Owen.

There are peculiar difficulties of a mechanical nature to be overcome in these vast abdominal collections of pus, which now demand our attention, and which, as I maintain, will often

require more heroic treatment than has hitherto been brought to the attack.

The abscesses under consideration, commence in the vicinity of the psoas muscles, sometimes in carious vertabræ, and sometimes in the loose connective tissue of the vicinity without any bone disease. Hence they are often called psoas abscesses, or if they commence in the iliac fossa, iliac abscesses. Wherever they originate, they may extend both upward and downward, and at last break externally. In most instances they point either above in the lumbar region, or below in the front half of the thigh, passing under Poupart's ligament. There is no definite rule deciding which direction will be taken, and some abscesses point both above and below simultaneously. The cavity is vast in size and irregular in form, but it is conspicuously divided into two parts, viz.: the internal sac, contained within the abdominal walls, and the external sac which spreads out between the skin and the deep fascia. The internal sac discharges into the external one through a long, crooked and narrow outlet.

Now two difficulties have hitherto beset the treatment of these cavities by antiseptic injections.

First, the liquid thrown in is prone to fill only the external sac, and to be so resisted by the long, narrow fistula, blocked with pus, which leads to the inner cavity, that it fails to reach the far off interior, and consequently arrests neither the suppuration nor the decomposition. It is to meet this difficulty that Callender, and a few other English surgeons lately advocate what some of us have already practiced a considerable time in Chicago—viz., the use of injections forced in under pressure, in the hope of thus reaching the interior recesses. The other difficulty is that both the opening in the skin, and the fistula of connection between the two sacs are prone to contract, so as to resist equally the evacuation of the abscess and the injection of antiseptics.

Both here and in London, we have endeavored to counteract this by the drainage tube, but too often could only insert it into the external orifice, while the internal fistula of communication was either wholly missed, or only tubed through a part of its length. It is just here that I wish to advocate more heroic meas-

ures. I think the internal sac should be reached at all hazards, or if that is too strong a term, at some hazard, for if it is not done, the patient will have to meet a terrible increase of danger. If the abscess points in the lumbar region, the operation is not seriously difficult. After reducing the size of the cavity by a suitable number of preliminary tappings, the external sac, which is only covered with skin and fat, should be freely opened and its interior searched with a sound or catheter to find the fistula leading inward. If there is difficulty, the incision may be prolonged upward as far as necessary. When the route is discovered, a drainage tube must be carried well into the interior of the body, and made the route of copious, and if need be, forced injections.

If the pointing of the abscess is below Poupart's ligament, the difficulty is greatly enhanced, but the principles of the operation are the same. The external sac ought, in my opinion, to be laid open to any extent necessary to enable the surgeon to find the upward route, and then measures should be taken to pass a flexible drainage tube far up into the abdominal part of the abscess. In old contracted cases I have sometimes found it impossible to accomplish this. Now if the patient in such case is found to be steadily running down in health, he will be, I think, justified in running some risk, since he has little ground of hope in any other way. It would be obviously possible to first make a dissection below Poupart's ligament and finding the fistula, pass a tube as far up into the iliac fossa as possible; then we could make an incission above the ligament in the way we do when tying the iliac artery, and carefully lifting the peritoneum from the iliac muscle, we shall soon feel and reach the tube inserted from below. Now we can open and enlarge the fistula upward and place a drainage tube quite up into the lumbar region, and bring out its lower end above Poupart's ligament. If this route in any case is thought unadvisable, I would advocate cutting in at the lumbar region as in lumbar colotomy, only keeping very close to the quadratus lumborum muscle, and following its inner surface inward to the psoas, cautiously lifting up the peritoneum until the abscess is found. In case of difficulty in finding the cavity of pus, exploration with the aspirator would often show the route. Once found, the abscess could be furnished with a drain-

age tube running straight outward, and placed in conditions well adapted to effect a cure.

Of course I do not advise to subject every patient to this bold treatment. The proper course is clearly this.

As soon as the abscess points at all externally, it should be aspirated, running the needle in obliquely in the thicker portion of the sac, so as to ensure re-closure. To prevent septic results, the needle and the skin should first be carbolized. When the cavity is partly filled again, it should be aspirated a second, and if necessary a dozen times.

In this way no perceptible risk is run, and in many cases the pus will be found gradually becoming more serous, and showing fewer corpuscles, until at length it is almost as transparent as water, and the abscess is gradually obliterated without ever having been open to the air; meanwhile the patient gets fat and rosy, and shows none of the dangerous symptoms resulting from open air discharges. If the pus continues to form too persistently, the cavity can be washed out at the time of each tapping with carbolized water.

However there are two circumstances which may prevent success. First, the puncture of the aspirator needle may fail to heal, and commence some day to discharge. This accident is frequent, and in expectation of it the patient should be provided beforehand with the means of instantly making a carbolized injection and dressing without waiting for the surgeon. The other obstacle to success is that the pus may be filled with curdy concretions, so that it will not run through an aspirator, nor even through a large trochar. In this case I advise a free valvular incision, and the evacuation of clots and all through it, with an effort at re-closure. If this effort fails, I would have prompt recourse to a drainage tube, with any incisions and operations which may be found necessary as above stated, to insert the tube well within the inner sac.

I have not yet been obliged to make the elaborate pelvic dissection from below, but I have tubed the inner sac three times from the lumbar region, twice with complete success, the patients appearing now out of danger. The third case was a remarkable

one, for the abscess pointed in both groins, and in the lumbar region, discharging from all three points at once.

I tubed the inner sac through the lumbar route, and apparently for some months arrested the downward progress of the patient; however she resided in quarters which were foul with putrid air, and which had no possibility of ventilation. She died at last of an attack of accute gastro-enteritis.

In conclusion, I would urge again the importance of early and energetic surgical action, and, if the preliminary measures fail, the resort to bold operative measures to enable us to drain and inject the internal sac of the abscess.

No. 6 SIXTEENTH ST., Sept. 2, 1878.

ON SOME NOVEL MODES OF RELIEF IN CERTAIN VISUAL DEFECTS.

BY H. GRADLE.

(*Paper read before the Chicago Medical Society, August 5, 1878.*)

GENTLEMEN: My remarks of this evening pertain to a case of conical cornea under my care some months ago. The patient, a lawyer, some 42 years of age, gave the usual history of this complaint, viz: gradually increasing indistinctness of sight since puberty. Both eyes appeared as if a drop of dew rested upon the corneæ. Their conical shape was very apparent, especially in profile view, while the irregularity of curvature of the surface showed itself in the distortion of the image of the window reflected from the cornea. The apex of each cornea was slightly clouded; beyond this, however, the optic media were perfectly transparent. The ophthalmoscopic examination in the direct image was impossible, on account of the irregular refraction. The inverted image, although not sharp, indicated no disease of the interior of the eye, which was, besides, excluded by a perfect field of vision and a perfect recognition of colors.

On account of the normal peripheral vision and the gradual accustomation to his present state, the patient could walk safely

even on crowded streets. He was, however, unable to recognize human features at any distance. Although the increased curvature of the cornea would naturally put the eye into a myopic condition, the irregularity in refraction was so considerable that sight was not better proportionately for objects close by, than for the distance. He could count fingers with his left eye at five feet distance, with his right eye at three feet. The cause of the visual indistinctness is readily understood. Since the exact focussing of rays of light entering the pupil depends in the first place on a proper curvature of the cornea, the irregularity of its surface in the present instance prevented, of course, any reunion of the rays into a single focus. When the rays of light are brought to a focus in front of or behind the retina, as in the ordinary anomalies of refraction, we can bring the focus to its proper place upon the retina by the use of correcting glasses. But in the present instance the rays were not at all united into a focal point, but scattered irregularly, and hence no spherical or cylindrical glass could be of much avail. This unpleasant but logical deduction had in fact been confirmed by previous patient, but unsuccessful attempts by other oculists. However, by shutting off the larger number of rays by the use of a narrow diaphragm, the retinal images gained in distinctness, but at the expense of the illumination. Through such a narrow opening he could count fingers at 15, and with the other eye at 10 feet distance. In fact the improvement obtained was sufficient to warrant use of a pair of opaque spectacles, with central perforation for a closer examination of distant objects, although their use on the streets would have been dangerous, on account of the narrowing of the field of vision. Close by, however, he saw no better with them, since the increased distinctness was too highly paid for by the impaired illumination. With the naked eye he could recognize large letters at the distance of one or two inches, but this was even more difficult when using a diaphragm. Neither the dilatation of the pupil by atropine, nor its contraction by eserine changed the visual acuity to any extent.

I proposed to the patient an operation, either the ablation of the conical apex after v. Graefe's original method, or the trephining of the cornea as practiced by Bowman and Wecker. But although

a good result, i. e., a return of the cornea to its normal curvature, is often obtained, a failure of the operation is by no means infrequent. The patient hence declined any surgical procedure for the present, but willingly undertook with me some optical experiments.

The refraction, which light undergoes when passing through the cornea may be expressed as the product of two factors, on the one hand the curvature of the surface, on the other hand the difference between the refractive power of the corneal tissue and of the surrounding medium, in the present case the air. Since the index of refraction of the cornea differs very little from that of water, the optical function of the cornea ceases when the eye is submerged under water. Hence we find the cornea of fishes flat, since any curvature whatever would be useless.

Physiologists (especially Czermak) have sometimes used an instrument called the orthoscope, for some optical researches. This consists of a frame, pressed watertight against the rim of the orbit with a front wall of glass, while the interspace between the cornea and the glass is filled with water. I had previously made some experiments with this apparatus at the clinic of Dr. Meyer, in Paris, but did not finish them on account of my departure. Instead of water, I made use of a fluid resembling the composition of the tears, viz: a ½ per cent solution of sodium chloride with a slight addition of gum acacia, but after all found that tepid water was equally well borne. In order to render the whole water tight, I lined the frame with a rubber tube, to serve as an air cushion. On thus submerging the cornea under water, the light passing through the water is not deviated from its course when it enters the cornea whatever be its curvature, and hence the focussing of the optic system depends on the curvature of the glass wall of the apparatus. I made use of a plane glass, but mounted in front of it the proper lens, in the present case a convex glass of 20 dioptrics (about 2 inch focus).

With these means the patient enjoyed, for the first time since his youth, a sight almost normal. At twenty feet distance he read with ease type No. 40 of Snellen's tables, while with an additional glass, convex 6, Jaeger's brilliant type (No. 1.) was read fluently (the eye being atropinized). The apparatus caused neither pain nor inconvenience to the eye, at least when in place for

half an hour. But its permanent use was forbidden by a different obstacle. The pressure necessary to prevent any leaking between the frame and the skin could not be endured for any length of time without injuring the skin, and during the few days the patient remained in town I could neither obtain nor invent any practicable contrivance.

Finding this device impracticable, I began investigating how the usefulness of a narrow diaphragm could be increased. Theory and experiment showed that the object must be: (1.) strongly illuminated (to counteract the darkening produced by the diaphragm), and (2.) brought close to the eye (because on approaching the object, its retinal image increases in size in a greater proportion than the circles of dispersion.) Both indications could be fulfilled by examining, not the object itself, but its inverted image in an astronomical telescope. By employing an objective lens of large aperture, the illumination of the image could be increased to almost any extent, its distance from the eye being of course dependent on the strength of the objective, while the proper ocular, with a narrow diaphragm, permitted an accurate perception of the image formed close to the eye.

On combining various lenses at my disposal on this principle, he saw plainly in the distance (V. $\frac{20}{30}$), and with the proper focussing read newspaper type (of course when inverted.) Reading, however, was not perfectly easy, on account of the difficulty of following the lines, and the magnifying of every tremor of the hand, still he read nearly as fluently as a normal observer. The patient, unduly particular as to appearances, hesitated however to order an instrument, none being found ready in the market, since he disliked the unavoidable inverting of the objects.

The principles, however, above mentioned, could be also utilized in the case of an ordinary terrestrial telescope, though to a less extent, but with the advantage of seeing objects erect. A small field-glass with narrow diaphragm over the ocular improved his distant vision materially, while the addition of a convex six in front of the objective, permitted at least the reading of papers.

Similar experiments can undoubtedly improve sight materially, in the more numerous cases of irregular astigmatism, in fact in any visual defect, dependant on irregular curvature of the corneal surface.

Society Reports.

SECOND ANNUAL CONVENTION OF THE AMERICAN DERMATOLOGICAL ASSOCIATION.

HELD AT SARATOGA SPRINGS, N. Y., AUGUST 27, 28 AND 29, 1878.

(Reported for the Chicago Medical Journal and Examiner, by I. E. Atkinson, M. D., of Baltimore, Md.)

SARATOGA, AUG. 27, 1878.

The American Dermatological Association met at 9:30 o'clock, a. m., at the Grand Union Hotel. Present, Drs. White, President, Wigglesworth, Duhring, Fox, Piffard, Van Harlingen, Heitzmann, Sherwell, Taylor, and Atkinson; and by invitation, Dr. Graham, of Toronto. After a short business meeting, the regular morning session was opened by the president, who briefly addressed the members, referring to the difficulties of classification and nomenclature in the study of dermatology, and the benefits to follow the labors of the committees appointed at the first meeting, to consider these subjects and to collect statistics of skin diseases in this country. The results of the labors of these committees must have an important influence in determining an improvement in the teaching of dermatology. During the year, the members of the association had actively contributed to dermatological literature, as shown by the list appended. Since the last meeting there had occurred the death of one member, Dr. Silas Durkee, of Boston. Dr. I. E. Atkinson, of Baltimore, then read a paper upon "The Pigmentary Syphiloderm." This lesion, whose existence is not generally admitted by writers, was first described by Hardy, in 1835. It has since then been very ably described, by Fournier especially. It consists in the appearance of faintly colored spots situated upon the necks of females almost

exclusively (29 times in 30). The spots are connected with each other by narrow bands of similar pigmentation, leaving small islets of normal or preternaturally whitened integument. The symptom is one of the later secondary manifestations. It is accompanied by no subjective symptoms. Neither is there any elevation of the skin, nor desquamation, nor preceding hyperæmia. Treatment has heretofore had no influence upon the lesion, which is insignificant and must often escape detection, and when seen, upon superficial examination appears more like a soiled skin than a pathological phenomenon. Dr. Heitzmann did not consider the term pigmentary syphiloderm a proper one; the "macular syphiloderm," he thought, would include all cases of this lesion, where the antecedent hyperæmia was of such transitory character as to escape observation. Dr. Duhring, while in Paris several years ago, had observed in Hardy's clinic cases of "syphilide pigmentaire," but had considered them to be not at all satisfactory, and though on the look out for it had only last year observed a case in a young prostitute, 17 years of age, in the hospital of the Univ. of Pa., which he diagnosticated as the pigmentary syphiloderm as described by Fournier, whose description he considered altogether the best—the lesion was quite different from any that he had ever before encountered. Though strongly believing this patient to be syphilitic, he had been unable to identify other syphilitic symptoms. Dr. Sherwell, had frequently seen similar cases, and considered them ordinary chloasma or as vitiligo. He had never succeeded in curing one. Dr. Fox thought an undeserved prominence had been given the lesion, but that while syphilis always precedes it he thought the true condition was vitiligo. He had already expressed his views in the *American Journal of Medical Science*, for April, 1878. Recently he had seen a mottling all over the body like a macular syphiloderm, which the patient, though syphilitic, claimed to have been present since childhood. Dr. Piffard had never recognized the lesion as an independent one. He thought probably two affections were confounded. Vitiligo may be present in syphilitics as well as non-syphilitics. He objected to the definition of vitiligo as given by most writers. Pigment sometimes returns spontaneously to the patches. Dr. Taylor, in a large number of cases, had frequently seen a pig-

mentary eruption upon the neck, but had observed no points of difference between syphilitics and non-syphilitics. He thought the Latin races more predisposed to pigmentary abnormalities and that this lesion is probably more frequently observed in them than with us. He referred to a physician whose hands were the seat of vitiligoinous patches every summer. The president considered that for the present the burden of proof rested upon those who maintained the independence of the lesion and that more extended observation was required.

Dr. L. A. Duhring then read a paper upon "A case of the so-called Xeroderma of Hebra." The patient was a young woman 17 years old, of Irish parentage, father living, mother dead of cancer, several brothers and sisters alive and healthy, no family history of consumption. This child, at the age of six months began to show upon her nose and cheeks freckles, which increased in number from year to year, and at the age of nine years were as extensive as at present. It was stated that three years ago, while employed at work with machinery, a dozen or more pinhead sized pimples came upon her cheeks and when disappearing left pock-like marks. Dr. Duhring thought this latter an accidental eruption and that the patient was probably mistaken as to their course. Within several years freckles had disappeared from the backs of the hands, leaving atrophy. Almost the whole general surface was pervaded with lentigines, telangiectases and spots of atrophy. The lentigines were scattered at haphazard, sometimes clumped. They were pinhead, but sometimes extended in almost a sheet. In color they were dirty yellow, brown or almost black. Telangiectases were scattered about, but were most numerous upon the neck and chest; they were small and ill-defined, sometimes angular or rounded, and were generally of pinhead size. They were generally inconspicuous, seldom elevated. The skin could be readily picked up. The scalp was invaded. The atrophy upon face and back of hands was noticeable, but not very conspicuous. The patient's general health was good. There were no subjective symptoms. The points of interest were, the early age of the patient when the disease began (as is usual), the slow evolution and chronic course. The atrophy was very superficial. The pigment change was the first in the train of symptoms. The telangiectasis and

freckles finally disappear, to be followed by atrophy. Dr. Duhring thought the term Xeroderma inappropriate for the phases of the disease under his observation. The discussion of this paper was postponed until after the reading of the paper by Dr. Taylor, upon the same subject. Dr. George H. Fox, of New York, then read a paper "On the proper use of the term Acne." Dr. Fox argued that the term should be restricted to inflammatory conditions of the sebaceous glands, due to disordered vascular supply arising from internal disorder. Comedo, milium, etc., he regarded as independent disorders. The term should not be used indiscriminately.

Dr. Wigglesworth, of Boston, objected to the term Acne Rosacea, where the sebaceous glands do become inflamed after long capillary congestion. But acne, in other respects, represents a pathological series, of which seborrhœa and comedo are phases.

Dr. Van Harlingen, of Philadelphia, agreed with Dr. Fox as far as concerns acne arising from internal medications, and would like to have these matters settled by a definite terminology. Comedo, he thought, had no influence upon acne, and may be independent of it. Dr. Graham, of Toronto, upon invitation, stated that he had seen cases of sycosis which he regarded as acne. Dr. Sherwell agreed that all forms should be included under the term except those arising from internal artificially-induced conditions. Dr. Piffard thought that in cases where the rosacea exists without any indication of the glands being involved, the term acne should be discarded. There are also cases where rosacea is present with acne. Dr. Fox declared that no cases of acne will occur in healthy people, and that the lesion always arises from internal causes. There is a difference between acne and rosacea, the former representing an active, the latter a passive process. A paper entitled, "A case of scleroderma, by Dr. F. P. Foster, was then read, in Dr. Foster's absence, by Dr. Taylor. A young lady with no family history of cancer, noticed an abrasion upon the nipple. It remained tender for some weeks, and an enlargement the size of a small chestnut appeared at the inner border of the gland. The breast was larger and warmer than natural; there was infiltration, but no appearance of schirrus. Gradually the parts became firmer and involved the skin. Two eminent surgeons diagnosticated schirrus. She consulted Dr.

Foster in February, 1877. The skin of both breasts was then involved, as well as a portion of the left upper extremity. She was subjected to a tonic and a galvanic treatment. Dr. Keyes concurred with Dr. Foster in the diagnosis of scleroderma. The hardness of the skin varied in degree considerably. There was a sense of constriction and shortness of breath. The entire upper half of the trunk became involved, the infiltration extending upon neck and down to left groin. Hyperæsthesia finally made thorough examination impossible. Towards fatal termination there was an irregular fungating mass in the region of the left nipple and ulcers near the navel. The infilitration involved both upper extremities. Towards the last the patient's distress was so great that as much as thirty-six (36) grains of morphia had to be daily hypodermically inserted. Dr. Heitzman thought that the author of the paper had described a case of cancer *en cuirasse*, and not a case of scleroderma. Dr. Van Harlingen did not recognize the symptoms of scleroderma in Dr. Foster's case. Dr. Taylor thought that the presence of ulceration in the case recited should not necessarily exclude a diagnosis of scleroderma, since he had seen ulceration in scleroderma to such an extent that amputation of the leg had to be performed. The president thought the case unlike scleroderma. Dr. Piffard referred to the use of hydrocotyle asiatica, mentioned by Dr. Foster, as used in the treatment. He had used it in lupus, eczema and psoriasis. Had seen lupus improve under its use, but that epididymitis had been occasioned by it.

End of morning session.

August 27—Afternoon Session.

Dr. Heitzmann then read a paper upon "Epithelium and its Performances," of which the following is an abstract:

If we watch a single living protoplasmic body, for instance, an amœba, a colorless blood-corpuscle, a pus-corpuscle, with high magnifying powers of the microscope (800-1,200) we invariably see a delicate network both within the nucleus and the protoplasm. The body is surrounded by an extremely thin, shining, homogeneous layer, and such a layer always lines vacuoles also, which temporarily or permanently may form in a creeping pro-

toplasmic body. The network of the nucleus, its surrounding shell, the network of the protoplasm and the covering and lining shells both of the body and its vacuoles are formed by the living matter, the active contraction and passive extension of which cause all changes of shape and locomotion during the life of the protoplasm.

All formations in a highly-developed animal body, being analogous to the outer covering layer of a single protoplasmic corpuscle, therefore covering the outer surface and lining all cavities within the body, which are in direct or indirect connection with the outer surface, are termed *epithelia*. Formations on the contrary analogous to the wall of a closed vacuole of a single protoplasmic body, bear the name of *endothelia*. Epithelia are present on the outer surface of the body, the skin and its prolongations, the hairs, nails, sebaceous, sudoriparous and mammary glands; on the cavity termed the intestional tract and its prolongations, mucous and salivary, pepsin, and intestinal glands and the liver; on the cavity of the respiratory tract and its mucous glands; on the cavity of the genito-urinary tract, inclusive of all of its prolongations into the kidneys, and the genital glands. Endothelia line the closed cavities of the skull and the spine, all its covering membranes, and all ventricles in the brain and their elongations into the spinal cord; the cavities of the chest, both pleural and pericardiac; the cavity of the peritoneum; all articulations; all blood and lymph-vessels, inclusive of the cavities of the heart. A thorough distinction between epithelia and endothelia, however, cannot be maintained, as there is a direct communication between both, on the openings of the uterine tubes into the peritoneal cavity; the epithelial formations of the ovaries are in no communication with the outer world, and the crystalline lens, a formation completely epithelial in nature, is covered by the endothelium of the interior and posterior chambers. Epithelia and endothelia are fully identical in this intimate structure; there exist single epithelial layers in the body, for instance, those of the bile-ducts, the uriniferous tubules; and also ciliated endothelia, for instance in the ventricles of the brain and the central canal of the spinal cord.

Epithelia and endothelia represent continuous layers of living

matter. The former are the earliest formations in a developing body, after the stage of indifference, started by the segmentation of the ovum, is passed; they form the epiblast and the hypoblast. These are invariably devoid of blood vessels and lymphatics, while all formations of the mesoblast, inclusive of its upper layer, from which arise the central nervous organs, are provided with blood vessels and lymphatics. The epithelial and endothelial layers are built up by single, polyhedral, protoplasmic bodies, the formerly so-called "epithelial cells." Each body is separated from its neighbors by a narrow cloak of a lifeless, horny cement substance, this being kindred to the basis-substance in the connective tissues. Under the microscope, we can see only the lateral parts of the cloak, which appear in the shape of a pale seam around each epithelium. The network of the living matter within the protoplasm of the epithelium, sends delicate conical offshoots through all formations of the cement substance, both in epi- and endothelia. These offshoots, up to the present time, have been termed "Thorns of Max Schultze," in honor of their discoverer (1864). That the thorns are universal formations in the cement substance, and especially formations of the living matter, thus building the bridges by which all epithelia are uninterruptedly connected, can be proved by different chemical reagents, and by the study of pathological occurrences within the cement substance, viz.: inflammation, fatty degeneration, etc. In the cement substance run the finest terminating fibers of the nerves, also in connection with the thorns, and indirectly with the net work in the interior of the protoplasm.

We distinguish mainly three varieties of epithelia: The flat; the cuboidal, and the columnar or cylindrical. Flat epithelia invariably construct the outer layers in stratified formations; cuboidal the middle layers, and columnar the lowest layer, nearest to the connective tissue. Single epithelial layers may exhibit any of the named shapes; in the uriniferous tubules, for instance, we find all the three varieties, according to the calibers of the tubules. Columnar epithelia have two subvarieties, viz., ciliated epithelium, with whip-like elongations on the outer surface, therefore occurring only in single layers. The cilia here are in connection with

the network in the interior of the protoplasm (Th. Eimer and E. Klein).

Another variety is the bacillated epithelium, where the outer surface of the cement substance is provided with numerous delicate rods, such as in the intestinal canal and the bile ducts.

All organs of the body termed "glands," are formations of the epithelium. We distinguish two varieties of glands, viz., the acinous and the tubular. A roundish elongation of the epithelium into the connective tissue forms a simple acinous gland, represented by the mucous glands of the oral cavity, the larynx, the trachea. Repeated folding up of the pouch, leads to formation of compound acinous or racemose glands, represented by the sebaceous, the salivary, the lacteal, the prostatic and other mucous glands. A prolongation of the epithelium, prevailing in the longtitudinal direction, is termed a simple, tubular gland, represented by the pepsin and the intestinal glands. Repeated ramifications of the tubules result in the formation of compound tubular glands, represented by the seminiferous and uriniferous tubules. Another sub-variety of compound tubular glands may originate by coiling of the tubule, as we see in the sweat and ceruminal glands.

The main performance of epithelium, besides the protection of the whole body, conduction of terminal nerve-fibers, therefore of sensation, etc., is the elimination of used up material from the body, viz., secretion. Every glandular formation is epithelial, and every epithelial body can be considered as a gland, inasmuch as the secretion is based upon a function of single epithelia.

There are mainly three varieties of secretion, viz., the watery, the mucous and the fatty. The watery secretion cannot directly be studied under the microscope; we only conclude by watching amœbæ fed with carmine particles, that any time, when through the visible contraction of the living matter, without the protoplasm, carmine particles are thrown out from the amœba, a certain amount of its fluid is discharged also.

A liquid, being present one time in the blood, necessarily must pass through the walls of the blood vessels and enter first the protoplasm of the epithelia, before it can be expelled from these, evidently owing to the contraction of the living network of the protoplasm. The watery secretion is performed by the lachyr-

mal and the sweat glands; the latter produce a fluid greatly varying in the amount of its solid contents and its consistence at different times. Toward approaching death of the body, the perspiration is inspissated and almost mucous in character. The inspissation of the fluid pressed out from the blood vessels of the tufts of the kidneys, is evidently the main performance of the uriniferous tubules.

The mucous secretion directly can be observed under the microscope best on minute particles, cut off from the inner surface of the small intestine of a frog, by addition of a very dilute solution of chromic acid or bichromate of potash, pure water being too rapid in its action. First we see swelling of the protoplasm near to the outer or free surface of the ephithelium. Here the covering cement substance is bulging out, and after having reached the uppermost capacity of expansion, it bursts, and a pale globular body jumps forward, the swelled protoplasm, in which no trace of the former structure can be seen. A number of such pale globules coalesce, and form the jelly like mass called mucus. At other times the whole protoplasm swells within the cloak of the cement substance, and after being freed, still shows the netlike structure of the protoplasm, or isolated granules in a lively motion, the broken particles of the former living matter. Salivary and mucous corpuscles arise from such slow action upon the protoplasm. The cloak of the cement substance, partly or totally emptied, and perforated on one end, gives the appearance of a "goblet cell." A variety of the mucous secretion is that of the stomachic juice, of the bile, and of the semen, in the latter fluid being suspended formations of living matter, the spermatozoids, a direct offspring of the epithelia of the testicles. Saliva represents an intermediate condition between watery and mucous secretion.

The third variety of secretion can best be studied under the microscope on colostrum corpuscles, which are suspended in the serous discharge of the mammary glands for a few days after delivery. Here we see the first formed fat granules still in connection with the network of the living matter within the protoplasm, and we readily arrive at the conclusion, that fat is a directly transformed living matter. During the locomotion of

the colostrum corpuscle, very often fat granules are thrown up from its interior (S. Stricker). After a few days, however, no colostrum corpuscles are secreted any more, because the living matter of the epithelia is completely transformed into fat granules, leading to a destruction of the epithelia, the granules of which commingle with a serous fluid, and form the emulsion called milk. This process of fatty change of the living matter of the epithelia of the mammary glands is a remarkably rapid one; on microscopic specimens of the breast in full lactation, we find but little protoplasm unchanged; its greatest part is transformed into fat granules, which having been extracted from the specimen with oil of cloves, leave only the shells of the cement substance behind. The highest degree of fatty change of the protoplasm is reached in the sebaceous and the ceruminal glands.

This paper was discussed by Drs. Atkinson, Fox and Piffard, the latter re-asserting his previously expressed view of the derivation of the horny layer of the epidermis from the stratum lucidum of Oehl, and claimed that the study of dermatology was not exclusively to be conducted with the microscope; that the first object of dermatologists was the cure of disease, and that the microscope is not always our safest guide in diagnosis, and that it is impossible with it alone to distinguish several diseases whose etiology is different, and whose clinical symptoms are very unlike. Dr. Heitzmann replied to Dr. Piffard's objections. The president, Dr. White, then read the report of the committee upon statistics. The committee had succeeded in bringing together, from different districts, nearly 17,000 cases of skin diseases never before reported. The report included six districts, as follows: Boston, New York, Philadelphia, Baltimore, St. Louis and Chicago, giving a total of 13,328 dispensary and 3,035 private cases. Tables of comparative prevalence of the various skin diseases were also read. There was also submitted a report upon leprosy as occurring in this country. The cases were reported from Tracadie, in New Brunswick, in the French settlement, where it has prevailed since the last century. Cases were also reported from Boston, New York, Philadelphia, Baltimore, and a series of sixteen cases observed by Dr. Geddings in Charleston. Reference was also made to cases among the Swedish

settlers of the Northwest, and to a possible colony in Minnesota (reported to the chairman by Dr. Hyde). The prevalence of the disease among the Chinese in California was referred to. Most of the cases were of foreign birth, so that the disease may be almost said not to occur with us.

End of first day's session.

AUGUST 28—9.30 A. M.

At the business meeting, Drs. E. B. Bronson, of New York, F. B. Greenough, of Boston, and G. H. Rohé, of Baltimore, were elected active members of the Association. The Nominating committee having reported, the following officers were elected for the ensuing year: President, Dr. L. A. Duhring, of Philadelphia; Vice-Presidents, Dr. J. Nevins Hyde, of Chicago, and Dr. S. Sherwell, of Brooklyn; Secretary, Dr. R. W. Taylor, of New York; Treasurer, Dr. I. E. Atkinson, of Baltimore.

AUGUST 28—10 A. M. REGULAR SESSION.

Dr. L. A. Duhring, of Philadelphia, read a paper upon "A Case of Inflammatory Fungoid Neoplasm." The patient was a married woman, 58 years old, the mother of four children, and weighing 174 lbs. Health had always been good, and catamenia, which ceased at 46 years, regular. She has had suppression of urine occasionally, and some anasarca quite often. Her mother died of cancer of the face. In August, 1876, she experienced after a cold bath, soreness and pain. Two days afterward her skin became red, and three hours afterwards wheals appeared which lasted 24 hours. Since then has had various eruptions of urticaria and eczema. Upon 10th October, a lesion, which is still present, came upon her forehead, suddenly, as a red spot, like a superficial burn; it grew, showing many variations of color. In August, 1877, it began to rise slowly, like a boil, but without subjective symptoms. In one day, nine new small tumors came upon the scalp; they were like gristle to the touch, freely moveable, and soon disappeared. Near the original patch, in September, 1877, numerous small tumors came, without subjective symptoms. In following June, also, similar tumors came suddenly upon abdomen. Later, sensitive tumors appeared upon the

groins; also, there appeared, without her knowing when, tumors upon her buttocks and back. Dr. Duhring saw her first October 25th, 1877. The previous history, as given by patient, Dr. D. thinks reliable, she being a remarkably intelligent woman. When seen by Dr. D., the lesion involving the right side of the forehead (the original lesion), was of size of a half cherry, of a raspberry color, tense, containing no pus, tuberculated and furrowed. Inside of right arm was an oval papule, dull red in color. The natural lines of the skin were exaggerated. There was another tumor in the posterior fold of right axilla. Several patches were upon the abdomen. There was a patch in the groin half an inch in height, shape of a hen's egg, and smooth. There was much dusty yellow pigmentation. On October 26th, Dr. Duhring observed a new lesion that had appeared since the night before. It was near the nipple, olive shaped, rough, of a deep, pinkish color, soft and supple—not inflammatory, not changing color to pressure. It was evident that while tumors were continually appearing, they were almost as rapidly disappearing. Some were persistent, as those upon forehead. Some lesions grew with great rapidity. The growths extended over forehead, eyebrow and scalp, both flat and tuberculated. Iodide of potash and arsenic unquestionably aggravated the disease. Some of the patches disappeared as rapidly as urticaria. One tumor upon the left cheek softened and suppurated. This tumor, after it had existed three months, was excised. Its cut surface was grayish yellow, and firm, like sarcoma. Its weight was 1 oz. The principal features of the microscopic section of this tumor, which was exhibited, was that of inflammatory round cell infiltration. The points of the case were the variety of the lesions, their number and sudden appearance and rapid disappearance, and the preservation of the general health. It was a true skin disease. The patches were of different sizes, from split-pea to size of egg, sometimes fungoid, soft or firm, lobulated and furrowed, even in the flat portions, smooth or rough, crusted or not, without symmetry. All portions of the body were invaded. The only subjective symptom was variable itching. For some time, Dr. D. was unable to name the disease, or to find record of an analogous case. Hebra has, however, described a case. Hans Hebra has

also described a case. Geber has also written an account of Hebra's case. Dr. Duhring exhibited the case to the members. The patient pointed out several large tumors upon different portions of the body, which had appeared in the few weeks interval of Dr. Duhring's absence from Philadelphia. Some of these were quite as large as pigeon's eggs, and were already undergoing involution, the process beginning in the center. A remarkable feature was the perfectly normal condition of the skin at the points where tumors had been, but had disappeared. There was not the slightest evidence of interstitial absorption. Photographs and drawings were also exhibited. Dr. Duhring regarded the affection as benignant. He thought the fluid extract of ergot had had a decidedly beneficial influence upon the growths. Dr. Piffard had seen exhibited at the N. Y. Dermatological Society two somewhat similar cases. Dr. Fox thought that milder cases of a somewhat similar affection were not seldom seen. Dr. Sherwell described a case which he thought somewhat similar, and which proved fatal. A paper by Dr. W. A. Hardaway, of St. Louis, entitled, "Treatment of Hirsuties," was then read, in the absence of Dr. Hardaway, by Dr. Taylor. In the treatment of hirsuties, the essential point being the destruction of the hair follicles, it is evident that ordinary epilation only stimulates the hair growth. To destroy the papilla, he employs a method first used by Dr. Michel for the treatment of ingrowing eyelashes—that of electrolysis. He uses by preference a Hill battery of from 8 to 20 cells, the needle, if fixed in an electrode made of a hollow bone pencil-holder—the needle-holder being attached to the negative pole—a wet sponge to the positive pole. The needle is to be inserted along the hair as far as the papillæ, and the current stopped when a slight white frothing is observed at the orifice. The hair may then be removed by epilation, and unless it comes easily, the operation is a failure. With eight elements, two to five seconds are sufficient; with twenty elements, the current is continued not more than one second. With the instrument exhibited, he was enabled to destroy 160 hairs in 30 minutes. No scar resulted. There is some pain in the operation. The needle should be the smallest cambric. Dr. H. has also occasionally employed a solution of

lime chloride 8 Gm. to 12 Gm. of water. A small quantity of this is introduced into the hair follicle with a hypodermic needle. He recommended this method when the first was not practicable. Dr. Piffard had employed a similar procedure, but yielded to Dr. H's claims to priority. He objected to introducing the needle before extracting the hair. The needle employed by him was of irido-platinum, which was stiffer than the ordinary cambric needle. He condemned Neumann's process of electro-cautery as impossible, as the circuit implies two loops of wire in the needle, without formation of large scars. He preferred a lower power and a longer time (half a minute or so) in destroying the follicle and papilla. He thought Dr. Hardaway's handle the most convenient that he had seen. Dr. Fox thought the operation more painful than stated. The needle should be as small as possible, and of irido-platinum. Platinum was not so convenient. He used four or five cells. He had been able to continue his operation for three-quarters of an hour, and finally his eyes gave out, before the patient's patience. Hairs will nevertheless frequently reappear. Dr. Piffard, in answer to the president's question, thought that a permanent cure was effected in three-quarters of the hairs operated upon at a sitting, and that it is not worth while to attack any other than large hairs like beard hairs. Ill-formed hairs appear after an imperfect destruction of the follicle. Dr. Heitzman had introduced a pin charged with nitric acid, with trifling pain, and a success of about 50 per cent. He was not very hopeful as to the permanent success of the operation. Dr. Duhring had employed a process suggested to him by Dr. Bulkley. He uses a three-cornered needle, and twists it about in the follicle. His results were fairly successful.

End of morning session.

August 28—3½ p. m.

Dr. H. S. Piffard read a paper on a "Case of Gangrænopsis." This was the case of a child one year old, treated at the Charity Hospital, New York. It was admitted April 15, with ulceration of the tongue and lips, snuffles, coppery plâques and tubercles over vulva, buttocks and thighs. The child's mother had constitutional syphilis. Mercurial treatment was ordered

for the child. Three days later a gangrenous spot one inch in diameter appeared upon left ala nasi and cheek, beginning as a small indurated nodule with an inflamed base. In eight hours it was black and gangrenous, and rapidly increasing. The mercurial treatment was stopped and quinine given hypodermically, a nitric acid wash applied, and nourishing food given. The gangrene rapidly extended, and the child died ten days from the commencement of the disease. At the autopsy the malar bone and hard palate were found necrosed, the lower lobe of the left lung was consolidated. The diagnosis was either malignant pustule or mercurial gangrene. Dr. Piffard thought the latter the true condition. Dr. Duhring reported a case of extensive sphacelus following syphilis, but probably due to mercurialization from calomel, which had been used as a dusting powder to some ulcers upon the lip, the powder probably falling into the mouth. Dr. S. Sherwell read a paper on "The use of Linseed and Oil as Therapeutic Agents in Diseases of the Skin." Dr. S. used the Indian seed pure, or administered it in a bread containing 40 per cent. of the meal with wheat flour. He had cured cases of pityrasis rubra and of pemphigus foliaceous and vulgaris. He had also seen icthyosis benefited. He thought it had a specific determination to the sebaceous glands, and of especial value in the treatment of eczema. Dr. VanHarlingen had used linseed oil, but had not been favorably impressed with it. Dr. Piffard thought he had observed good effects from its use. By consent, Dr. I. E. Atkinson, of Baltimore, then read a paper upon "The Botanical Relations of Trichophyton Tonsurans."

Previous investigations into the botanical relations of the microscopic vegetations giving rise to certain skin diseases have been fallacious on account of the faulty methods employed. Cultivations upon sliced vegetables, as carrots, apples, etc., so inevitably become overwhelmed by adventitious growths as to make a definite conclusion from them impossible. But little less objectionable are the slide and mass cultures employed by recent mycologists, since there must necessarily occur far too frequent exposures in the frequent uncovering of the objects for investigation, etc. A method guaranteeing absolute purity to the cultivation is that employed by VanTieghem and LeMonnier in their re-

searches into the mucorini. This plan is as follows: A glass ring four to five mm. in height, with an interior diameter of about fifteen mm., is fastened to a glass slide with Canada balsam. The spore to be cultivated is then sown in an appropriate nutritive fluid upon a very thin cover glass, the diameter of which is equal to that of the glass ring. The cell is then completed by laying the cover glass with the nutrient drop underneath, upon the glass ring; a few minute drops of oil upon the surface of the latter, upon which the cover glass rests, serves to protect the cell from external influences. All fluids and appliances must be as pure as it is possible to make them. This method may be called the "cell culture." In a cell like this a very small portion of hair shaft drawn from the follicle is sown, the nutritive fluid being either orange juice, Pastein's fluid, with or without sugar, decoction of horsedung, or any other approved fluid. The first two being preferable. In a large majority of cells thus planted there will be no change, some will develop bacteria, or moulds of adventitious nature. In a few cells a mode of development will take place, which is characteristic of the fungus of trichophyton, and can readily be distinguished from foreign fungus, the latter either thrusting its hyphæ under the cover-glass or developing within the cell from a single center, and readily discoverable, the mass of trichophyton spores remaining entirely quiescent. Where, however, the cultivation is a successful one, there is a simultaneous, uniform, multitudinous growth of hyphæ, accompanied sometimes by a decided swelling of the spores, which may become many times their original size; [figure shown] the latter, however, ceases as soon as hyphæ become developed extensively. These hyphæ, where the nutrient fluid is abundant, tend to form a closely meshed mycelium, and to form but few reproductive organs. Where, however, the nutrient fluid is soon used up, reproductive organs are freely developed. In all instances, without exception, these organs have been similar to those of the mucors, sporangial. In these successful cultures, adventitious fungous growths have never occurred. The fungus then, of trichophytina, is identical with mucor mucedo. The method is easily practiced, and only requires care, attention and persever-

ance, in spite of the many disappointments arising from the tendancy of the spores to remain quiescent.

Dr. Piffard objected to the process of examination as not being free from sources of fallacy.

The next paper was upon a "Case of Ulcerative Scrofuloderm," by Dr. Arthur Van Harlingen, of Philadelphia. The case was of an elderly woman, who first developed symptoms akin to eczema, but rapidly became subject to ulcerations of the general surface of a very peculiar character. Her strength gradually failed, but before death there was developed in the tongue and on the hard palate, nodules. Dr. Van Harlingen was somewhat inclined to attribute the case to a tuberculosis of the skin, but adopted the title given above. The result was fatal. Dr. Duhring, on seeing the case, was at first disposed to think it an old eczema, but the depth of the ulceration changed his mind. When he again saw the patient after a considerable interval, he was much astonished, and felt unable to decide about it. He had never seen anything like it before. He agreed with Dr. Van Harlinger as to its nature.

AUGUST 29—10 A. M.

Dr. R. W. Taylor, of New York, presented a paper entitled, "A Further Contribution to the Study of the Xeroderma of Hebra." This paper is supplementary to a paper read at the first annual meeting of the Association at Niagara Falls, Sept., 1877, a synopsis of which has already been given. Dr. Taylor has since had three of the cases under close observation, and has devoted much study to them. He was now able to report his conclusions. The lesions of this rare affection are vast numbers of pigmented spots, upon the face, neck, back of hands, forearms, breasts, and partly legs, also teleangiectases, atrophies, and new growths. The spots come and go. The course is as follows: First, the vessel becomes telangiectatic, may be in from 24 to 48 hours; the brown spots come upon the site of this dilatation, which may be linear or of various shapes; brown spots may appear, however, without the preceding vascular enlargement. The telangiectases may again come in the same spot, atrophy gradually taking place with gradual disappearance

of pigment. The essence of the disease is vascular new formation —as epiphenomena are neoplastic formations, which he thought not necessarily malignant. The tumors which are prone to occur upon the face, may become withered, were twisted off with some hæmorrhage, and healed slowly, he thought them not epitheliomatous. The activity of the disease ends in early life, but the pigmentation and atrophy are permanent. Xeroderma is a bad name, since until atrophy occurs there is no dryness. It is a vascular neoplasm, and Dr. Taylor proposed as the name for it, angioma pigmentosum et atrophicum.

Dr. Heitzmann stated that he had been the first to observe these cases. He had now a patient in whom the disease was of 20 years duration. A tumor which he regarded, had appeared, and which he had removed five times. The specimen exhibited by Dr. Taylor, from one of the tumors of the face, Dr. Hertzmann declared to be myxomatous, and would call the tumor myxo-angioma. He accepted Dr. Taylor's definition of the disease. Dr. Duhring was unable to determine Dr. Taylor's succession of symptoms in his own case. He was pretty sure that freckles first appeared exactly like lentigo. In places there were no vascular dilatations at all. He had not seen the pigmentary lesion follow telangiectasis. Dr. Taylor thought Dr. Duhring's case was too old to contradict previous vascular dilatation, as the latter had time to disappear, leaving lentigines and atrophy. Dr. Piffard thought the specimen one of malignant neoplasm, a myxo-carcinomatous growth.

The President then presented the report of the committee upon Nomenclature.

The following being recommended:

Class I. Disorders of the Glands.

1 Of the Sweat Glands.
Hyperidrosis.
Miliaria crystallina.
Anidrosis.
Bromidrosis.
Chromidrosis.

2 Of the Sebaceous Glands.
Seborrhœa, (a) S. oleosa, (b) S. sicca.
Comedo.
Cyst, (a) milium, (b) wen.
Molluscum sebaceum.
Diminished secretion.

Class II. Inflammations.
Exanthemata contagiosa.
Erythema simplex.
Erythema multiforme. (a) E. papulatum, (b) E. bullosum. (c) E. nodosum.

Urticaria.
Dermatitis.
(a) D. traumatica. (b) D. venenata. (c) D. calorica.*
Erysipelas.
Furuncle.
Anthrax.
Phlegmona diffusa.
Pustula maligna.
Herpes. (a) H. facialis. (b) H. progenitalis.
H. zoster.
Psoriasis.
Pityriasis rubra.
Lichen. (a) L. planus. (b) L. ruber.
Eczema. (a) E. erythematosum. (b) E. papulatum. (c) E. vesiculosum. (d) E. madidans. (e) E. pustulosum. (f) E. rubrum. (g) E. squamosum.
Prurigo.
Acne.
Impetigo.
I. Contagiosa.
I. Herpetiformis.
Ecthyma.
Pemphigus.

Class III. Hæmorrhages.
Purpura. (a) P. simplex. (b) P. hæmorrhagica.

Class IV. Hypertrophies.
1 Of Pigment.
Lentigo.
Chloasma. (a) C. locale. (b) C. universale.
2 Of Epidermal and Papillary Layers.
Keratosis.
Callositas.
Cornu cutaneum.
Verruca.
Verruca necrogenica.
Xerosis.
Icthyosis.
Hypertrophy of nail.
3 Hirsuties.
4 Of Connective Tissue.
Scleroderma.
Sclerema neonatorum.
Morphœa.
Elephantiasis Arabum.
Rosacea. (a) R. erythem. (b) R. hypertroph.
Framboesia.

Class V. Atrophies.
1 Of Pigment.
Leucoderma.
Albinismus.
Vitiligo.
Canities.
2 Of Hair.
Alopecia.
Alopecia areata.
Alopecia furfuracea.
Atrophia pilorum propria.
3 Of Nail.
4 Of Cutis.
Atrophia senilis.
Atrophia maculosa et striata.

Class VI. New Growths (benign).
1 Of Connective Tissue.
Keloid.
Cicatrix.
Fibroma.
Neuroma.
Xanthoma.
2 Of Vessels.
Angioma.
Angioma pigmentosum et atrophicum.
Angioma cavernosum.
Lymphangioma.
3 Of Granulation Tissue.
Rhino-scleroma.
Lupus erythematosus.

* These indicating affections not properly included in other titles of this class.

Lupus vulgaris.
Scrofuloderma.
Syphiloderma.
(a) S. erythem. (b) S. papul.
(c) S. pust. (d) S. tubercul.
(e) S. gummosum.
Lepra. (a) L. tuberculatum.
(b) L. maculatum. (c) L. anæstheticum.
Carcinoma.
Sarcoma.

Class VII. Ulcers.

Class VIII. Neuroses.
Hyperæsthesia. (a) Pruritus.
(b) Dermatalgia.
Anæsthesia

Class IX. Parasitic Affections.
1 Vegetable Parasites
Tinea favosa.
Tinea trichophytina. (a) T. circinata. (b) T. tonsurans. (c) T. sycosis.
Tinea vesicolor.

2 Animal Parasites.
Scabies.
Pediculosis capillitii.
Pediculosis corporis.
Pediculosis pubis.

This report, after discussion, was adopted, the ayes and nays being called for by Dr. Piffard. The ayes being Drs. Taylor, Wigglesworth, Duhring, Van Harlingen, Heitzmann and Atkinson; the nays being Drs. Piffard, Fox and Sherwell. The retiring president then expressed his gratitude for the consideration shown. He believed that the success of the association had been assured by the high order of the papers presented before it, and predicated a prosperous future for American dermatology. He read by title his paper upon "A Case of Recurrent Cutaneous Hæmorrhage with Urticarial and Bullous Efflorescences." The new president, Dr. Duhring, upon assuming the chair, promised to do all in his power to promote the interests of the association, and bespoke the co-operation of the members. He indulged the hope that the ensuing year will call forth scientific research in dermatology, and still further cement the friendships of the members of the association.

The association then adjourned to meet in the city of New York upon the first Tuesday of September, 1879.

A New Disease.—According to reports from Readville, Mass., several of the operatives in a curled hair factory have died of a disease supposed to have been introduced with the hair of diseased animals, principally Siberian horses.

Clinical Reports.

NOTES FROM PRIVATE PRACTICE.

Cystic Degeneration of the Chorion.

On July 12th, 1877, I saw in consultation, Mrs. C——, aged 30, medium size; sanguine temperament. She gave the following history: married ten years; two children living, the youngest aged four years; one supposed abortion at third month, about two years before; general health good until recently. In March her menses did not appear, and she supposed she had taken cold; did not consider herself pregnant; menses did not re-appear in April; from the first she suffered from almost persistent nausea and vomiting; was treated by various physicians for "biliousness" and other vague disorders. Early in May, she began flowing, and later profuse hæmorrhage occurred and continued at intervals of a few days until the above date, the discharge consisting of blood and at times a little "watery fluid." About the middle of June her legs began to swell and the abdomen to enlarge, and she continuously lost flesh and strength. Her last physician had for some time been administering active diuretics and drastic cathartics; also tincture of iron. On examination I found her very anæmic; scarcely a vestige of color in cheeks or lips; emaciated; tongue pale and flabby; appetite poor; no nausea; abdomen enlarged and fluctuating; legs enormously enlarged, pitting upon pressure; suffering from dyspnœa especially when lying down. Auscultation revealed a very distinct anæmic murmur over base of heart and carotids. I at once proposed to the doctor that we examine the uterus; to this he objected, thinking that it was a "passive hæmorrhage." I then recommended a continuation of the iron with tonics and nutritious

diet; to discontinue diuretics and purgatives, and, since the uterus could not be examined, to await farther developments. At 8 o'clock p. m., July 26th, I was hastily called in consultation with this same physician to see Mrs. C., who at one o'clock that day had commenced having labor pains and profuse flooding, which continued during the afternoon. About one hour before my arrival, a large mass had been expelled from the womb, which nearly filled an ordinary chamber, and which on examination proved to be a vesicular mole. Its appearance is well illustrated in the figure on page 567, Thomas' Diseases of Women, third edition. Quite a quantity of cysts still remained; these I removed and administered fluid extract of ergot and whisky freely, the latter in cream.

It seemed almost impossible for her to recover from the effects of such a prolonged and profuse drain of the vital fluid, but with the exception of what might be termed hæmorrhagic fever which followed reaction, she gradually improved, and in a few weeks was entirely well. The rare occurrence of such cases, is my apology for presenting this. In conclusion I would urge the *absolute necessity* of examining the uterus when a patient comes to us with the above symptoms. How many wives and mothers may have been sacrificed to the ignorance or indifference of the attending physician?

H. L. HARRINGTON, M. D.

WARREN CO., ILLS., August 29th, 1878.

A Case of Partial Inversion of the Uterus:

Mrs. F—, German, aged 42 years, large, muscular and generally healthy, and mother of five children, was delivered of the last on the 16th of January, 1878, by a midwife. The labor was attended by no unusual circumstance, and the placenta removed without pain or delay. After delivery there was an unusually large amount of blood lost, but not sufficient to alarm either the midwife or the patient, who, although weak, was considered to be in a fair post-partum condition. She continued to have profuse sero-sanguineous discharges, became exhausted, and, in consequence, very much alarmed.

This imperfect history is all I could glean from those surrounding the patient at the time I was first called to see her, viz: the 24th of January, eight days after confinement. She was nearly bloodless, and presented all the symptoms of acute anæmia, such as languor, listlessness, despondency, tinnitus, palpitation, œdema, great pallor, rapidity and weakness of pulse, inability to move without a sense of faintness, etc. The appetite was gone, the tongue coated, the bowels were constipated, and there was an entire inability to swallow or retain any solid food. As her stomach was so weak she had not attempted to take any but fluid nourishment, hence her diet since confinement had consisted almost entirely of fennel and beef teas. The discharge from the vagina still continued, but was not very profuse.

Although I suspected some grave accident had happened to the uterus, in the presence of such an untoward condition of the patient, I determined to delay a thorough vaginal examination until I could induce a more vigorous state of the circulation. With this view I prescribed the tincture of iron and sul. quinia, internally; ordered perfect quietude, poached eggs and milk, as much as the stomach would bear, and, as soon as that organ became a little more tolerant, the tender portions of young pigeons. This course was continued perseveringly, the food being tolerated well, until January 28th, when she was very decidedly improved, although, during the few days previous, the discharge had become a little more profuse. Her pulse had gained vigor and become slower; the countenance was more cheerful, the lips more natural in color, and motion much better tolerated; she had now become hopeful, and was beginning to take an interest in her household affairs. At this visit I ventured to make a vaginal examination. I found the os uteri patulous, dilated to about the size of a silver dollar, and filled with the fundus which extended slightly below the level of the external border of the firm ring in which it was grasped. By means of one hand placed above the symphysis, while two fingers of the other were in the vagina, a cup shaped depression, showing the absence of fundus uteri, was easily recognized. There was evidently a partial inversion of the uterus present; the cervical portion of the organ was firm while the fundus and body, as well as I could determine by palpation,

were soft and impressible. Reflecting on this state of things, and believing my patient in too prostrated a condition for the manipulation necessary to restore the fundus, I was led to hope also, that if a little tone could be imparted to the fibers of the body and fundus, the discharge would diminish and possibly a spontaneous restoration result. Continuing the former supporting treatment and quietude, I administered half a drachm of Squibb's fluid extract ergot every four hours. From the time the ergot was commenced the discharge gradually became less, the fundus and body firmer, and the os smaller until the 28th of February, 1878, when the uterus was restored to its proper size, shape and position. The os was closed, the sound entered the uterine cavity three inches, and penetrated three inches into the uterine cavity by deep pressure above the symphysis, while two fingers pushed the uterus upward, the natural outlines of the fundus could be distinguished. Tonics and a nutritious diet were continued from this time forward, and were followed by uninterrupted improvement, until the patient was entirely cured.

My father, Dr. Wm. H. Byford, saw the patient with me February 10th. He fully verified my diagnosis, and coincided with me in the treatment. He also examined the patient August 16th, 1878, and assured me that the uterus was not only restored to its natural position, but was in a healthy condition.

I will not presume to make any comments on this case, as the points will readily present themselves to the reader. The only thing to which I will draw attention is the steady improvement following the administration of ergot. It is true, nature might have done all that was necessary for the restoration of the uterus without this remedy; it certainly produced no injurious effects.

In this connection it may be apropos to mention a case which was under the observation of my father where spontaneous restoration took place after the uterus had been completely inverted for fifteen years.

HENRY T. BYFORD, M. D.

Unusually High Temperature in a Case of Sunstroke.

At 3 p, m. on the 17th day of July I was called to see P. H——, a brick-yard employé. I found the man entirely unconscious, face flushed, breathing laboriously, with now and then slight convulsive contraction of the muscles of mastication, and skin dry and excessively hot—so hot that to touch him was unpleasant. On inquiry I ascertained that he had not been feeling very well all day, and about half an hour before my arrival fell down unconscious, and had been carried under the shed where I found him.

Astonished at the great heat of his skin, I determined to ascertain his temperature before carrying out the treatment I had concluded upon. While removing his clothes to get at the axilla, etc., I despatched some bystanders for a large cake of ice. I placed the thermometer in his axilla—first noticing that the mercury stood at 95°—and drew his arm firmly against the side of the body. The mercury began to rise rapidly, and in less than a minute reached the very top of the tube in the thermometer. Of course I was amazed, but there was no doubting the fact of the register. My thermometer is of the best English make, and has been proven trustworthy. It is scaled to 112°, the tube reaches a distance equal to 1° above, so that the case had a temperature marked to 113°. The rapidity with which the mercury rose to this height convinces me that the register would have been higher had there been more space for its markings. I entertained very little hope of the man's recovery. While waiting for the ice, I uncovered his body of clothing and dashed cold water all over him repeatedly, with, at first, scarcely any response from his nervous system. Soon, however, there followed a deeper and more complete respiration after each application of water. When the ice arrived I placed large pieces over the groins, in both axillae, to the sides of the neck, and embanked the head in small fragments, covered the abdomen, and in fact put it everywhere that it could be made to hold, choosing by preference such parts of the body where large blood-vessels come near to the external surface. By this means—ice and cold water—in an hour's time the temperature was reduced to 99½°. As the temperature came to 100° the man began to show more

response to irritation of any kind—he began to vomit and ejected large quantities of yellow-colored fluid. Still he showed no signs of returning consciousness other than low muttering and response to irritation, such as sprinkling water on his face. After keeping the man's temperature below 100° for half an hour, I sent him home, with instructions to have one teaspoonful of Hoffman's anodyne administered to him every hour until I saw him again.

I saw him in two hours; he was still semi-unconscious and vomiting watery mucus, yellow in color. His temperature had risen to 103°. I reapplied ice and water until he was cooled off, and ordered the anodyne continued, together with beef tea, or soups of any kind. I visited the man the next morning, found him talking cheerfully to his friends, and complaining only of headache and a little soreness of the limbs—temperature 100°. The man convalesced rapidly. CHAS. T. PARKES.

Chronic Otorrhœa; Caries of Petrous Bone; Fatal Meningitis.

Although the number of cases of death from chronic suppuration of the middle ear is already pretty large, the publication of a short report of every new fatal case may not be quite useless, in view of the fact that physicians have but just begun to realize the great danger so often connected with that frequent and commonly neglected aural disease, chronic suppurative otitis.

On September 11, 1877, H. F., aged 42 years, peddler, called at my office. He has had a discharge from the left ear fifteen years, and never thought much of it, because the ear did not ache. But for the past three days he had been suffering the most agonizing pain in the left ear and around it, so that he could not sleep nor eat. I found the ear very sensitive; the post-auricular region slightly œdematous and tender; in the external meatus some pus; farther in, its lumen was blocked by a large, soft polypus, which, on removal with the wire snare, proved to be almost of the size of a cherry, and to have sprung from the promontory with a very thin peduncle. Membrana tympani and ossicles had completely disappeared.

My first impression was that the suffering of my patient was caused by retention of pus, whose free discharge through the ex-

ternal meatus was evidently impeded by the polypus. Therefore, I expected the removal of this growth would bring quick and perfect relief. The œdematous swelling behind the ear disappeared in a few days; but the pain persisted for two weeks; the suppuration did not abate to any appreciable degree, and a cautious examination with a probe of the place where the polypus originated, revealed extensive caries, and extreme sensitiveness of the bone. On the 1st of October the patient was free from pain, but complained of dizziness and a strange, heavy feeling in his head. Nevertheless he was determined to go into the country on some business. I tried to persuade him into a change of mind, because I apprehended serious complications. But he left the city on the next morning, and, as I was recently informed, died of meningitis two weeks afterwards.

CHICAGO, September, 1878. F. C. HOTZ.

VOMITING during anæsthesia produced by ether is so common an occurrence that we are liable to overlook the dangers which may attend it. A recent issue of the *British Medical Journal* contains the account of a lamentable case in which vomited matters found their way into the trachea and lungs and rapidly caused fatal asphyxia. The trachea was opened, but all efforts to save the patient's life proved futile. Suffocation from this cause is very rare, but it is well for us to be fore-warned of the possibility of such an accident.—*Cincinnati Lancet and Clinc.*

ETHER V. CHLOROFORM.—From the annual report of Prof. Bardeleben's clinic in Berlin, for the year 1876, we learn that death from chloroform occurred in that year four times among twelve to fifteen hundred narcoses. In all four cases a small amount of chloroform was used when death occurred. These accidents as well as an exceedingly large number of troublesome narcoses caused the professor to abandon chloroform and to use chloral-chloroform and ether. All narcoses since have been free from complications.

Correspondence.

RIZZOLI'S OSTEOKLAST — HEGAR'S OPERATION FOR FIBROID OF THE UTERUS— AKYSTOPEURASTIC.

MUNICH, August 1, 1878.

Editors Chicago Medical Journal and Examiner:

In my last letter I described Ogsdon's operation for genu valgum, and reported a case operated upon by Prof. Von Nussbaum. The result, as in all previous cases, has been perfect. The limb was retained in its normal position with a straight splint without any difficulty; no fever followed, and the pain was inconsiderable. Passive motion was made twelve days after the operation, and repeated daily. Subcutaneous osteotomy, for correcting angularity of long bones, has been entirely abandoned here, and osteoklase with Rizzoli's instrument has been substituted. During this session Prof. Von Nussbaum has made numerous experiments with this instrument on cadavers; all of them have proven: 1, any of the long bones can be fractured; 2, the fracture takes place at the desired spot; 3, the operation produces a simple fracture, without any serious complications. To avoid injury to the vessels the fracture must always be made in the direction of the deformity, and the limb straightened gradually and carefully.

This instrument was used on a little girl with outward curvature of both legs. Both legs were fractured. The fracture took place with a loud snap. The limbs were placed in the natural position and a plaster-of-Paris dressing applied. No reaction took place—the patient made a favorable recovery.

In ovariotomy operations, the pedicle is secured with two or more stout catgut ligatures, and always left intra-peritoneal. If the pedicle is large it is tied in two or more parts, and to give additional security in preventing secondary hemorrhage, the large vessels are separately ligated with catgut at the cut end of the stump. No drainage tubes are employed. Of the three operations which I saw, all concerned patients, between 30 and 40 years of age; tumors, simple cysts; in one case extensive adhesions—they all recovered; only one presented slight evidences of peritonitis. Prof. Von Nussbaum believes that the peritoneum is not liable to inflammation, provided it is not exposed to infection, hence the importance of opening the peritoneal cavity under the antiseptic spray.

Another very important item he considers to be the employment of artificial heat during the operation. The room is thoroughly disinfected with carbolic spray an hour before the operation, and the temperature raised to 75° to 80° F., vessels with hot water are placed near the extremities and body of the patient, the carbolic acid solution for the spray and for cleansing the wound must also be warm.

As the peritoneum is one of the most active absorbing surfaces for infectious matter, all operations which necessitate its exposure should be carried out on strict antiseptic principles.

Hegar's operation of removing both ovaries for fibrous tumor of uterus has been performed here three times. The principle of the operation consists in anticipating the climateric period, and by arresting the physiological congestions of the organ, arrest the morbid process, and render the tumor amenable to absorption. One of these cases proved successful. The patient had been so much reduced by profuse hæmorrhages that she was confined to bed. The tumor was large, involving the greater part of the uterus. Both ovaries were removed, through a small incision in the linea alba. She recovered rapidly, and after the lapse of nearly a year the entire tumor had disappeared. I witnessed only the last operation. The patient was about 40 years of age. The tumor had existed for many years, causing, the last few months, serious loss of blood. She has suffered on several occasions attacks of severe pain, indicating the existence of

previous pelvic peritonitis. Attempts had been made to promote the absorption of the tumor by the introduction of sponge-tents through the cervical canal. but were always followed by symptoms of inflammation, consequently they had to be abandoned. As a last resort it was decided to perform Hegar's operation, as the only chance to save her life. A small incision was made in the linea alba, half way between the pubes and umbilicus, where the upper margin of the tumor was found. The tumor was connected to surrounding parts by adhesions, and the peritoneum showed signs of recent inflammation. The incision was enlarged to the umbilicus, and the right ovary brought forward and removed, after ligating its pedicle firmly with catgut. The left ovary was found intimately connected with the surface of the tumor; in order to reach it a lateral incision had to be made. The whole ovary could only be removed after a very tedious dissection and application of numerous ligatures. The wound was closed with silver wire and catgut sutures, the whole operation having been conducted on strict antiseptic principles. The patient rallied from the operation, but died thirty-six hours after from peritonitis. What had rendered the prognosis very unfavorable in this case were the firm adhesions of the left ovary and the existence of recent pelvic inflammation.

Akystopeurastic is a term introduced by Middeldorpf for designating a new method for exploration. The instrument employed is a long, slender needle. It is applicable, in the first place, as the most reliable means for ascertaining the existence of death. The needle is thrust into the chest, between the fifth and sixth ribs, so as to come in contact with the heart, or enter its substance; if life is not extinct the end of the needle will move synchronous with the heart; if death has taken place this motion will not be observed. It is likewise an important adjunct for diagnosing dislocations. In a doubtful case of injury of the shoulder joint the needle can be pushed below the acromion process toward the glenoid cavity; if the bone is not dislocated, it will meet with resistance on part of the head and neck of humerus; if dislocation has taken place, it will enter easily and meet with no obstruction until it comes in contact with the

glenoid cavity. Simple as it is, this method will prove to be a valuable aid in surgical diagnosis.

Chronic varicose ulcers are treated as follows: The ulcerated surface is made aseptic by the application of an 8 per cent. solution of chloride of zinc, and covered with wet borax lint and gutta-percha tissue. As soon as healthy granulations make their appearance the surface is covered with dry borax lint, without the impermeable covering. The result of this treatment has been very beneficial.

This week the present semester will close, and with it the most interesting surgical clinics of Prof. Von Nussbaum.

I have seen so many valuable things in his practice that it would be impossible to communicate them all within such a brief space. They can only be appreciated by those whose fortune it is to witness his operations.

As a practical teacher and original thinker he has certainly no equal.

In my next communication I will attempt to tell you something of the remaining teachers and of the merits of this school.

Very truly, N. SENN, M. D.

To the Editor of the Chicago Medical Journal and Examiner:

One of your correspondents, "E. Ingals, M. D.," in an article in your September number, in which he arraigns a goodly number of the medical profession of this city for alleged violation of the medical code, says:

"An advertisement appears day after day in the most widely circulated papers of Chicago, signed by more than a dozen well-known physicians of the city, who have united in the Herculean task of informing a distressed and waiting public of whom it may purchase a pair of spectacles."

Can this be so? Did the Doctor read the advertisement correctly? Did he put on *his* spectacles? Or, is the defect at the *other end* of his optic nerve? What are the real facts about this famous advertisement? Simply these:—A clever artisan pub-

lishes in the daily papers his business card, in which he states that he is recommended by certain gentlemen, giving their names, and appending, on his own responsibility, their titles and public position. *This is the whole case!*

Now, as my name is in the list, I desire to say that I hold myself strictly amenable to the code of ethics adopted by the American Medical Association, and I defy your correspondent to cite a single section of that code, the letter or spirit of which I have violated. But I suspect that the doctor has read the code about as intelligently as he read the advertisement which has disturbed him so much, and against which he has done such Quixotic warfare.

MOSES GUNN.

CHICAGO, Sept. 6th, 1878.

Editor of the Chicago Medical Journal and Examiner:

I must confess to a feeling of disappointment as I concluded my perusal of the correspondence in the last number of the CHICAGO MEDICAL JOURNAL AND EXAMINER. Glancing down the pages occupied by your distinguished correspondent, I was anxiously looking for something that should make me feel "the crimson in my cheek;" and, at last, I thought it was really coming, as the wonderful advertisement of the surgeon-dentist began to unfold its "lingering length" before my view. Now for a spicy narrative of a convulsion in the British Medical Association, I thought. I expected to read of nothing less than the death of the venerable Dr. Heberden, occasioned by mortification at sight of the name of John Hunter in the advertisement of a quack. Undoubtedly, we should be told of an outbreak of acne rosacea upon the proboscis of Sir Charles Bell, excited by a violent determination of "crimson" to the part. Beyond all question we should be informed of the manner in which Sir Astley Cooper and Mr. Abernethy took measures to punish this "offense to the (*sic*) honor and dignity of the medical profession" by getting up in the College of Surgeons, "demanding an explanation," and moving a reference of the case to the Royal Society of London, and to the Academy of Sciences in Paris.

But, "oh, most lame and impotent conclusion!" there was nothing of that sort; and I was compelled to lay down my journal with the conviction that if Dr. Heberden and Dr. Bell, and Messrs. Cooper and Abernethy ever cared to notice the document in question, they could only have smiled a little at the ingenuity of an enterprising dentist, and then calmly resumed those studies which have made their names immortal.

Allow me to suggest that if some of your correspondents would keep their minds as seriously occupied as these our predecessors did, they would find no leisure for the work of magnifying mole-hills into mountains, nor feel tempted to violate the code of ethics by thoughtless—let us hope unintentional—misrepresentation of their best friends. As for the allegations of your correspondent, it really is not worth while to take the time of your readers by a formal exposure of their utterly subjective origin and character.

HENRY M. LYMAN.

HEALTH OFFICE, HYDE PARK, Aug. 23, 1878.

Editor Chicago Medical Journal and Examiner:

The following sections of a revised ordinance, passed by the Board of Trustees of Hyde Park, and which went into effect on the 27th day of August, 1878, will be of interest to the physicians of Chicago and vicinity, and for that reason I send them to you for insertion in the JOURNAL, as the most convenient and sure way of reaching them.

"SECTION 10. Every physician, midwife, or other person who may professionally assist or advise at any birth or death, shall make a return of such birth or death to the health department of this village, such as now required by the State Board of Health to the county clerk. Said returns of births shall be made to said health department within four days after the date of such birth, and returns of deaths shall be made to said health department within twenty-four hours after such death may occur. It shall be the duty of said village physician to transmit the returns of births and deaths aforesaid to the county clerk within the time now prescribed by law.

"SECTION 11. No remains of any human being, having died within the corporate limits of the village, or whose body may be found within the limits of the same, shall be removed from this village for interment or otherwise, nor shall said remains be interred within the corporate limits of Hyde Park, until the certificate, as required in section 10 of this chapter, shall have been filed at the office of the health department, and a permit first had and obtained for such removal or interment."

It will be seen, by a noncompliance on the part of attending physicians upon their late patients, that the friends of deceased will be put to no inconsiderable trouble before interment can be had, as no interment can be obtained within Hyde Park of such deaths as may occur within the limits of the same until a *burial permit* be had, and no such permit can be had except on the death certificate of the attending physician, or the finding of a coroner's jury, as the case may require.

If physicians whose patients die within the limits of Hyde Park, and whose friends wish to inter them at Oakwood Cemetery, will please bear this in mind, they will save the friends of the deceased much trouble by promptly making returns of such death, as required above.

J. RAMSEY FLOOD,
Health Officer, Hyde Park.

IN the *White Mountain Echo*, of Sept. 7, 1878, we find recorded the proceedings of the United States Hay Fever Association, convened at Bethlehem, N. H., in the very heart of the White Mountains. The perusal of these pages is sufficient to move any one to—a sneeze. "O, ye tears,"—but stay—this is the month of October.

PHIMOSIS AS A CAUSE OF HERNIA.—In the examination of 51 children affected with congenital phimosis, Kempe discovered that 31 had hernia; five, double inguinal; a few, umblical. None suffered at birth, and the tighter the preputial stenosis, the earlier the hernia. All were relieved by circumcision; in five, the latter operation relieved the hernia.—(*Lancet, July*, 1878.)

Editorial.

THE LATE AGITATION ARISING FROM AN ADVERTISEMENT.

Members of the profession in Chicago have lately been very justly excited by the appearance in the daily papers of an advertisement which contained the names of a number of leading physicians of the city. To the names of these gentlemen were appended the professional and other degrees to which they were entitled, such as "A. M.," "M. D.," "Professor of———in——— Medical College," etc. The advertisement in question was written with so much skill as to make it appear that a large number of the professors in the medical colleges of the city, had ornamented their own names with the honorary appendages which they happen to possess. In order to emphasize the perfection of the articles advertised and recommended by the distinguished gentlemen who appeared to be his patrons, the author of the advertisement had it placed on the first page of the most extensively circulated daily journals, with a wood-cut at the top, so prominent as to preclude the possibility of its being overlooked by the most careless observer. This figure and long array of professors' names, made it the most conspicuous and attractive advertisement in the paper, and it doubtless served its purpose admirably. Immediately upon its appearance, and indeed very naturally, there was a free expression of surprise and indignation in medical circles. It was surprising that men of acknowledged merit and recognized position should lend their names to such a cause, and should in such ostentatious manner parade their titles before the public in connection with a subject that had no relation to the advancement of the welfare of the profes-

sion. The younger men were very properly indignant that their trusted seniors had violated the code of propriety, in so flagrant a manner.

The Chicago Medical Society took the initiative in passing resolutions requesting the erring ones to explain their position in the question at issue. Some responded to these resolutions, giving such explanation as seemed to them suitable to the occasion; others, however, did not think it necessary or proper to make any such response. The society after much warm discussion, exonerated from intentional wrong some of those who had offered explanation, and afterward indefinitely postponed consideration of the entire subject. No specific charges were made against any one, consequently no effort was made to administer discipline.

It is right that the profession should have a explanation of this disagreeable affair, that will enable those who desire it to avoid such unseemly and offensive publicity in future, and that will offer to those who feel most aggrieved at least an excuse for the apparently inexcusable facts. An optician who had recently established himself in Chicago, determined to convince some of its leading citizens that his work was greatly superior to anything heretofore offered to their inspection. Whatever the main fact may be, he succeeded by a painstaking exhibition of his wares and apparatus for making and adjusting his glasses, together with certificates of approval from many eminent politicians, lawyers, and physicians throughout the country, in making many of those who called upon him believe that he understood the subject upon which he was talking, and was an enthusiast in his calling. When he thought he had succeeded in proving the superiority of his wares to the satisfaction of his hearers, he would very politely request them to say so in writing. Those who complied with this request signed a note to that effect by appending their names. We believe in no instance was any degree or professional title found afterward attached to the names of such signers, nor was any verbal or written authority given for their subsequent use. We do not believe that any of the professional gentlemen concerned, knew to what use these signatures were to be put. We are furthermore certain that some of the signers at least, would never have consented to such ostentatious parade

before the public. The whole thing was managed most skillfully. There was no formal certificate to which the signatures were attached. The formidable and captivating array of names, degrees and titles was simply headed, "recommended by."

When the attention of the signers was called to the subject, some were willing to justify themselves by the reflection that the act was not in violation of medical ethics, and that it was nothing more nor less than a recommendation to the public of the work of an accomplished and enterprising mechanic, while others felt unable to justify themselves upon any other grounds than that they had been imposed upon by the advertiser, who had presumed to do in their names all that was unseemly and offensive to professional propriety.

Such instances of involuntary participation in offensive advertisements have, however, been of too frequent occurrence lately to be easily excused, and, as there is no redress after the matter has once received the finishing touch of an artistic manipulator, the profession has a right to demand that its members see to it in future that they be not outwitted by men in search of influential names with which to forward their individual interests. The impression produced by this unfortunate occurrence will not be lost on members of the profession here, who not only desire to be right, but who wish to avoid all appearance of wrong; and we venture to hope, indeed we confidently believe, that they will never be outraged in this way again.

Upon another page of this number will be found communications from two of the gentlemen to whom reference was made by a correspondent in our last issue. In a spirit of impartiality we have thus given space to representatives of each side of the question at issue, for an expression of opinion. No further discussion of the subject will be conducted in these columns, as we consider that whatever good might have been the result of such discussion, has been already accomplished.

THE SECULAR PRESS ON THE TREATMENT OF YELLOW FEVER.

We have not been surprised to notice in the columns of the daily press, criticisms upon the method and apparent want of success of the treatment pursued by our medical brethren, who are heroically contending against the epidemic of yellow fever in several of the Southern States. These criticisms have elicited, in one instance at least, a protest on the part of a well-known physician of this city, which has been accorded that degree of reserved acceptance usual in such cases. Daily journals are not given to unreserved acknowledgment of error. Their presses, like the king, "can do no wrong."

We say that we have not been surprised, simply because every intelligent man has learned the exact value of newspaper editorial opinions in this country. Upon any subject whose essential facts are recorded in text-books, census and government reports, biographies, and encyclopœdias—the average library of the "sanctum"—these writers speak by the card. In the small hours of the morning, when presses are already in motion, boys calling for "copy," and a thousand readers are waiting for an edition, the results of a superficial reading upon any given subject, dressed in the English of the average penny-a-liner, are often really surprisingly clever. He, however, who has completely mastered any subject thus discussed, smiles at the inaccuracy of the premises and the feeble shallowness of the conclusions reached.

They do these things differently in England. There, editorial articles (generally called "leaders") are carefully written, often weeks in advance, by men who have been specially prepared by years of study in the department alloted to their charge—men who often live at a distance from the metropolitan centers.

What we have to say upon the subject of yellow fever is already known to the world of science; it is well, however, to occasionally recite old truths.

Physicians are called to encounter three classes of disease; first, those which terminate favorably without human intervention; second, those which terminate fatally if neglected, and favorably if judiciously treated; third, those which terminate fatally in any event. Some diseases exhibit varieties in each class. Such a disease is yellow fever.

Mild cases of yellow fever, terminating favorably without medical treatment, occur in this as in all other epidemics. The fact is often best illustrated in the phenomena of the malady displayed in the negro race, though by no means confined to this class. Naturally these cases attract but little attention in the public press.

Other cases there are which, under almost any wise and judicious treatment, go on to recovery. Strange as it may sound to those unfamiliar with the facts, these cases outnumber all others, except in the very foci of contagion, and in the most malignant of epidemics. This year they can be numbered by the thousand, but patients in complete convalescence possess no interest in the eyes of the average newspaper writer and newspaper reader. It is the house which is in process of demolition that attracts the crowd, not the structure that is in building.

Nor is the treatment of these cases essentially peculiar. The principles of treatment which we recognize as based upon a sound pathology and large experience, will guide almost any judicious practitioner in the right course. There is no cast-iron rule for such cases. With a mortality of ten or fifteen per cent. of all patients seized with the malady, it is evident that some latitude can be allowed to those who are fitted by skill or experience to deal with the plague.

Lastly, there are the cases in which treatment is of no avail, and under any aspect, the issue of these is terrible. Patients of this sort are hopelessly doomed from the instant of attack, and the attack is remorselessly swift and direct. Any treatment worth the name, should have equal swiftness and intensity, but while the world lasts, none such will be found. For patients of this class are either, at the outset, stricken down with the virulence of the malady or, having been gradually and insidiously poisoned till the point of saturation is reached, they suddenly succumb.

The so-called "walking cases" are to be explained in this way, those in which a man who is engaged in the street, or in the counting-room, unexpectedly ejects black vomit and dies. Even in such persons, however, a skilled eye can early recognize symptoms of a formidable and even of a fatal character, which elude the observation of the less vigilant. Their hour of actual dissolution may be deferred for a brief space of time, but they are nevertheless dying at the earliest onset of the malady—death is occurring at the kidneys, whose function is suspended so suddenly that no opportunity is given for the usual protest of nature; it is occurring in the saffron-tinted skin, which often assumes the peculiar hue suggestive of incipient moist gangrene—it is occurring at the stomach whose black ejecta (even including the so-called "flies' wings" appearance), can be seen occasionally in other diseases of rapidly fatal prostration. In short, what typhoid and typho-malarial fevers can accomplish in weeks, yellow fever can accomplish in as many minutes.

When the heart of a man is perforated by a bullet, no one expects the surgeon to "cure." When a despairing wretch has swallowed a dose of strychnia, and the deleterious drug or its newly-formed compounds, have been absorbed from the stomach, society exonorates the physician from a share in the fatal result. If the bullet spare a vital organ, if the poison can be reached by pump or antidote, a responsibility is incurred by the practitioner.

But even surer than the bullet or the chemical salt is the intensest poison of yellow fever when it has once gained access to the human economy. Its full possession of the system is equivalent to doom. In such a person medical skill is utterly helpless.

We who write these lines know whereof we are writing. We have been in the midst of an epidemic, watched its career, despaired over its victims, saved those that were savable, received its foul ejecta in the face, and made post mortem examinations of its dead. We are not, therefore writing in the phrases of the press-room, but in the language of experience.

What medical skill can do in other morbid states of the human economy, that it can, and actually does accomplish in the treatment of yellow fever. What it can not do, when a ball has pierced the brain, a virus permeated the blood-mass, that it cannot

do in yellow fever. Yet in the one case the newspapers complain and in the other they do not.

The search, nevertheless, for the philosopher's stone, the elixir of life and the drug that can work miracles, will be continued. The greatest sinner in his moment of penitence can be shrived by the word of a priest. Why then cannot a man put a pill into his stomach that will absolve him from the consequences of the poison he has ingested, absorbed or inhaled to his mortal hurt? This is the argument of the world.

We know it cannot be done. We of the medical profession, who have studied, observed, reasoned and refused to believe in modern miracles, know that no plant that grows, no mineral in the earth, nothing that burrows, flies or swims, will ever give absolution in these cases. A larger knowledge may enable us to push the advanced line of savable cases further into the domain of the unsavable; it may give us a better prophylaxis. But while a man will burn his hand who holds it in the fire, so long will human life shrivel like a dried leaf in the full breath of this pestilence.

Our medical brothers in the South have built for themselves a monument more enduring than brass. Of the lives saved by their self-sacrificing devotion, there is no human record. Many of them have set on high before us an example of sublime heroism which can never be lost.

THE ROLL OF HONOR.—The following is an incomplete list of the noble dead who have fallen in the battle against yellow fever in the South: Drs. Chas. Gallagher, Herndon, B. W. Avant, Woolfolk, Chas. Bonner, Catlett, T. L. Bond, Menees, J. R. Renner, Jno. B. Hicks, Lehman, Jno. Erskine, Cage, McGregor, Blanton, Milton, Hawkins, J. S. Bankson, W. W. Hall, Hughes, Gillespie, E. J. Hughes, May, F. Sarner, J. C. Rogers, Hopson, K. T. Watson, W. R. Hodges, T. M. Dickinson, R. B. Williams, Mead, Booth, P. F. Whitehead, J. G. Byrne, Nathan McGee, J. E. Penn, M. J. McKee.

Reviews and Book Notices.

LECTURES ON CLINICAL MEDICINE. By Dr. M'Call Anderson, Professor of Clinical Medicine in the University of Glasgow. London: Macmillan & Co., 1878. Chicago: Jansen, McClurg & Co.

The author, in this volume, has thrown together, in a small compass, much of what has been the result of considerable experience, reading and reflection. It consists of seventeen lectures on topics of surpassing interest to the medical practitioner.

A clear and faithful exponent of his subject, the writer presents it with perspicuity; not discolored by some pet theory, nor influenced unduly by any prevailing fashion of thought. This little work is quite *au courant* of the most advanced medical literature; for whilst the author avails himself of the learning of such men as Graves, Watson and other eminent cultivators of medical science, belonging to an age, now nearly passed away, he loses no opportunity of profiting by all that is new and progressive in science. He therefore fairly estimates such advantages as we are supposed to derive from improved instrumental appliances in guiding us to a correct diagnosis; and gives us the result of his experience as to the worth of new modes of treatment. As we read each case, his style is so simple and invested with such an air of candor, as to invite confidence even from those who are disposed to scepticism, in these times when theories are so often rashly formed, and readily pass from speculation into practice.

We propose now to give a general sketch of Dr. Anderson's work, and whilst passing in review the chief subjects of which it treats, we regret that neither time nor space will permit us to dwell on them to the extent each is so justly entitled. We must

therefore limit ourselves to a very brief notice of some; and select for a fuller consideration, others, that just now engage more especially, the attention of the profession.

The first lecture is introductory. In this he shows how important clinical teaching is in making skillful and successful physicians. How, without it, the mere reading of systematic works can never reach this result; and that a chief cause of our ranks being thronged by incompetent men, is, in a great measure, due to the neglect and inefficiency of clinical instruction. In this chapter he enumerates many of the aids we derive in treatment from the simple application of cold in fever and in localized inflammation. When alluding to the cold bath, in enteric fever, he graphically describes his feelings, when for the first time, he had recourse to it as a remedy.

"I must confess," he writes, "that on the first occasion on which I used it, it was with fear and trembling. The first case in which I tried this treatment (a case of enteric fever), was a most unpromising one. The patient, a young female, had a temperature varying from 104° to 105.4°; a pulse of 134; respirations, 48. She was delirious, bordering upon insensibility, in a state of great prostration, with profuse diarrhœa, and with very pronounced congestion of the lungs. Before leaving the bath, her temperature had fallen to 101.3°, her pulse to 120, her respirations to 42. Her delirium was gone, her cheeks less flushed, and she expressed herself as feeling more comfortable. From this time onwards, all the distressing symptoms rapidly subsided, and she made a perfect recovery."

With the same object he advises the application of iced cloths. In this we ourselves, after a struggle with long-established and deeply rooted prejudice, now, from the experience of the last year or two, fully concur. He gives a case in which congestion and tenderness of the liver was thus treated by the systematic application of iced cloths to the hepatic region for half an hour three times daily, and in which the result was, as he expresses it, "magical." No blue-pill, no cupping, no leeches, nor blistering, but the simple application of cold. This treatment we have fully tried with the same favorable result.

The second lecture consists of "Cases illustrative of pain as a symptom of disease." In this he impresses on the class the circumstance that the significance of this symptom is "exceedingly varied, and that we must endeavor in all cases, if possible, to ascertain the nature of the morbid state of which it is the ex-

pression, before devising measures for its removal." But that there are some cases in which it is not possible speedily to ascertain this, must be consonant with the experience of every physician; and too strict a compliance with the rule would often be attended by unnecessary suffering to the patient. Still, we must not, from this observation, be supposed as endeavoring to invalidate a sound principle of practice. For in all cases we should investigate and try to ascertain the true meaning of pain, no matter from what part it may proceed, just as we would interrogate the abnormal functions of any organ, with the view to ascertain the relation that the derangements of the former bear to the latter.

The third lecture is devoted to cases illustrative of gastric and cerebral vomiting. In this he contrasts their distinctive features and presents two cases as types of their respective kinds. The eighth and ninth lectures are of paramount interest and importance. They are models of excellence in clinical teaching. The subject of both is the "Treatment of aneurism of the aorta." Cases of such are graphically related, followed by comments clear and condensed. In the treatment, the author deviates, not unjustifiably, however, from what has been the routine, but we must add, hitherto unavailing practice in a large majority of instances.

Our readers may remember that with Morgagni commenced the era of clinical teaching of aneurism of the aorta. For though the credit of distinguishing the disease in the living subject, and proving the correctness of the diagnosis by subsequent autopsy, belongs to Vesalius, who wrote in 1557; yet more than a century elapsed before Morgagni considered the subject in the more copious recital of facts; in his clearer views respecting the nature and mode of formation of aneurismal tumors; in his exposition of the morbid changes of the vessel inducing them; in his demonstration of the many and varying manifestations that arise from their compression of surrounding parts; and in his accuracy in the enumeration of their several terminations. Since then, Scarpa, Corvisart, Lænnec, Bouillaud, and Hodgson have contributed, each his share, to throw light on a subject that had been so little understood that Riolan, in 1658, declared that

aneurism could not affect the aorta, owing to the thickness of its walls, and Elsner, in 1690, when writing of a case of aneurism of the aorta, refers to it under the head "De paradoxico aneurismate aorto." Still, nearly half a century ago, previously to the writings of Stokes, Greene and others of the Dublin school, clear and distinct views derived from anatomy and physiology were not generally held on this disease; so much so, that we can remember when a correct diagnosis of aneurism of the aorta was considered among the especial difficulties of practice. At present, what a marked contrast! What aids we acquire in closely observing pathological phenomena, as in the progress of the affection, the tumor extends, and comes into close relation with surrounding parts! Here our knowledge of anatomy and physiology enables us to grasp every indication presented, as each organ in turn invaded by the tumor supplies us with varying manifestations progressively developed.

Aneurism of the aorta arises most frequently at the origin of that vessel, and here it is in relation with the heart itself. It may compress the auricles, the pulmonary artery and the superior cava; increasing, it presses on the trachea, the bronchi, the œsophagus, the pneumogastric, and the recurrent nerves, particularly the left recurrent. Coming forward it perforates anteriorly the thorax and appears externally. It may perforate a lung, or open into the cavity of the pleura. As each function is interfered with, symptoms arise, whether as regards the viscera, the circulation or the nerves, the import and interpretation of which must be determined by our knowledge of the structure and functions of the organism. It must not be supposed that the disease terminates, after perforating the thorax, in hæmorrhage, in the majority of cases. Asphyxia is the most common cause of death. When aneurism of the arch of the aorta presses on the bronchi, trachea, on one of the lungs, or on the pulmonary artery, this most likely will be the result. After asphyxia, hæmorrhage is next in the order of frequency; then inanition by compression of the œsaphagus; gangrene of the lung; paraplegia and sloughing of the sacrum from pressure on the spinal marrow or softening of the brain by obliteration of the carotids, or finally by mere exhaustion. However, without

pression, before devising measures for its removal." But that there are some cases in which it is not possible speedily to ascertain this, must be consonant with the experience of every physician; and too strict a compliance with the rule would often be attended by unnecessary suffering to the patient. Still, we must not, from this observation, be supposed as endeavoring to invalidate a sound principle of practice. For in all cases we should investigate and try to ascertain the true meaning of pain, no matter from what part it may proceed, just as we would interrogate the abnormal functions of any organ, with the view to ascertain the relation that the derangements of the former bear to the latter.

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further preliminary remarks, we will let the author speak for himself:

"On the 11th October, 1873, there was admitted into the Royal Infirmary, a man who was about 34 years of age. For the last four years he has been a French polisher, but previously to that time he was a joiner, and was frequently required to lift heavy weights. His diet has always been good, and his habits temperate. He has uniformly enjoyed good health, and has had neither rheumatism nor syphilis. About three years ago he began to complain of palpitation, especially on exertion, and 21 months after this, while attending his wife, who was laid up with fever, he experienced a sharp pain in the left breast, which extended into the left shoulder and down the arm. On account of these symptoms, he entered the infirmary on January 11th, 1873, and was said then to be laboring under dilated hypertrophy of the heart. Under the influence of rest, tincture of veratrum viride in 5-drop doses, and syrup of the iodide of iron, he improved considerably, and was dismissed on March 29. For four months after this he continued in tolerable health, although he suffered at intervals from the palpitation and pain; but about three months ago he observed that he was becoming hoarse, and since then the hoarseness has gradually increased, although it never amounted to aphonia. About this time, too, he commenced to complain of attacks of dyspnœa, coming on for the most part when speaking or walking rapidly, and giving rise to a feeling of suffocation referred to the region of the larynx. For some months also he has had a short, dry, somewhat hollow cough, unaccompanied by expectoration. About five weeks prior to admission, a pulsating tumor was detected by a medical man in the jugular fossa, but for a couple of weeks before this he felt a beating above the breast-bone. When the tumor made its appearance, the palpitation and pains in the chest subsided. When first discovered it formed a well marked prominence at the root of the neck, was about the size of a hen's egg, and was tender to the touch. After the appearance of the tumor, some difficulty of swallowing was experienced, and he had the feeling 'as if the food was going the wrong way.' This symptom has latterly in great measure disappeared. He does not sleep well at night, which seems to be due to the pulsation in the tumor. He perspires freely, has been losing flesh rapidly, and frequently changes color. Tongue moist and slighted coated, appetite variable; bowels uniformly costive; pulse 66, natural; temperature, 98.4°." "On uncovering this man's chest, and placing him upon his back, a distinct swelling was observed at the top of the sternum, and inclined a little to the left side—a swelling which was not very prominent, but which occupied an area about equal to that of a hen's egg. It was to the eye a distinctly pulsating swelling; and on applying the hand, it was found to be very soft, and not only the seat of pulsation, but also, what is a very characteristic symptom, of expansion, and each time the ventricle contracted a distinct vibration was experienced—'purring tremor,' as it is called. On percussion, there was well marked dullness, not only over the tumor, but also over the upper part of the manubrium sterni, and extending a little into each subclavicular region. On

applying the stethoscope a loud, rasping, systolic murmur was heard over the tumor. It was also heard over the whole of the chest in the vessels of the neck and arms, although more markedly in those of the right than in those of the left side, and in the thoracic and abdominal aorta, but it was inaudible in the femoral vessels. The history of this case and these physical signs pointed very conclusively to the existence of an aneurism of the arch of the aorta.

"But let me point out to you before passing further that in cases of intrathoracic tumor you may have a somewhat similar history, and you may have likewise most of these physical signs, and, therefore, mistakes are apt to be made. You may even have the physical signs of pulsation and of murmur; of pulsation, because the tumor may be lying on the aorta, or one of the large vessels from which it may be communicated; and of murmur, because it may be pressing on one of these vessels and obstructing the flow of blood through it. There were, however, two physical signs in this case which are not observed in cases of tumor. One of these is 'purring tremor,' and the other the feeling of expansion in addition to pulsation. Then there were other features in the case which confirmed our diagnosis, if such confirmation was needed. On examining the superficial vessels of the arm for example, we observed that they pulsated very visibly; that they were tortuous, and felt like firm, hard, almost tendinous cords. In fact, we had here signs indicating a degeneration of the coats of the superficial vessels; and we know that when the superficial vessels are degenerated, the coats of the aorta are generally degenerated, too, and that a degeneration of the coats of the aorta is the usual predisposing cause of aneurism. Then on examining the heart we found that the apex-beat was displaced. It was situated three and a half inches below, and an inch and a half to the left of a vertical line drawn through the nipple. The impulse of the heart was heaving; it was observed over a preternaturally extensive area, and there was increased dullness on percussion in a downward direction, and to the left. That is to say, there were the usual symptoms of dilated hypertrophy of the left ventricle of the heart—a condition which is very usually, though not invariably, met with in connection with aneurism of the aorta, owing to the obstruction which it offers to the onward passage of the blood. In cases of aneurism, too, and for a similar reason, we often find inequalities in the pulses on the two sides of the body. There was not much difference in the pulse at the wrists in this case, but in the right carotid the pulsation was very much stronger than in the left. Again, in non-aneurismal tumors, and particularly in cancerous tumors, which are those most frequently observed within the chest, there is very often a marked distention of the superficial veins. In aneurism this is not generally a marked feature, because the aneurismal tumor is soft and yielding, and does not compress the parts to the same extent as a solid, and therefore unyielding, tumor. In our patient there was no marked distention of the veins. And, lastly, the sex of the patient was just what we might expect in a case of aneurism, which is much more frequent in males than in females. There are, however, certain symptoms frequently observed in cases of aneurism of the aorta, which were conspicuous (sic) for their absence in this one. Let

me mention a few of these. Sometimes the thoracic duct is compressed, and then, owing to the system being deprived of its nutrient supplies, there is rapid emaciation. Our patient was not much emaciated. Again, in a case in Dr. Scott Orr's wards, in which I lately performed galvano-puncture, there was dilatation of the left pupil from pressure upon the sympathetic, which was absent in our patient. In a good many cases there is pressure upon the recurrent nerve; but in this one, although the patient was hoarse, there were none of the usual symptoms of pressure upon it; there was no paralysis of the vocal cords, and there were none of those attacks of suffocative dyspnœa which constitute such a distressing feature of many cases of aneurism of the aorta. And, finally, there was no evidence of distinct pressure upon the bronchi, because there was no marked shortness of breath, and the air entered apparently with equal freedom into both lungs.

This patient was admitted on the 11th of October, and we thought it right, for a short time at all events, to watch him without carrying out any very energetic treatment. We kept him in a state of perfect repose in bed; we regulated his bowels with castor oil in order to prevent any straining at stool, and, with the view of calming down the nervous and circulatory systems, we gave him five and twenty grains of chloral at bed time. It soon became evident, however, that the tumor was progressing rapidly towards the surface, and the only hope for him, therefore, in my opinion, lay in giving him the chance of the operation of galvano-puncture. This was performed seven times in all—namely, on October 22d and 26th, on November 2d, 7th and 23d, and on December 1st and 14th. In each operation a Stohrer's battery with large cells was used; and unless I state the contrary, you may take it for granted that only one needle was used, and connected with the positive pole. The first operation then was on the 22d October, on which occasion eight cells were used, and the operation lasted half an hour. On October 26th the tumor was not in the least diminished, but, on the contrary, was becoming more prominent towards the left side, and the patient complained of a feeling of soreness across the root of the neck. On this day, therefore, the second operation was performed. Six cells were used for ten minutes, and then eight for fifty minutes—one hour in all; and during the whole of this time the patient complained of burning heat in the aneurism. On October 28th the tumor was somewhat firmer, and a distinct hard line was observed along the track of the needle. The skin covering it was the seat of a slight inflammatory blush, and the patient complained of a feeling of stiffness across the root of the neck, and occasionally of "stounding" pains in the tumor itself; temperature 99.3°. On account of these symptoms of reaction we only allowed him light food—milk diet and soup. We gave him a draught of castor oil, and applied ice-cold cloths over the tumor for half an hour at a time. On October 30th the pain in the tumor had disappeared, and the temperature had fallen to 98.4°, but the feeling of stiffness and soreness was even more marked, and there was some complaint of pressure upon the windpipe, of shortness of breath, and of weakness. On November 2d the third operation was performed, the needle being introduced into upper part of the tumor. Eight cells were employed on this occasion, and the operation continued thirty minutes,

during the whole of which time the patient complained of intense burning pain. This, however, was soon relieved, as on the former occasion, by the application of iced cloths. On the 3d November, as he complained a good deal of palpitation and of pulsation in the swelling, the tincture of veratrum viride was prescribed in doses of three drops, gradually increased to ten, three times a day. On the 6th November the tumor felt firmer. There was no pain, and the patient felt comfortable. On the following day the fourth operation was performed. On this occasion two needles were made use of—one connected with the positive, and one with the negative pole. They were introduced parallel to one another, and an inch and a quarter apart. The operation was continued for thirty minutes, four cells being used for the first twenty, and six for the remaining ten minutes. During the whole time the patient complained of intense burning pain. Now mark what happened on withdrawing the needles. On withdrawing the needle connected with the positive pole, not a drop of blood escaped; on extracting the needle connected with the negative pole, however, a jet of blood followed, which at first was dark, but soon became florid and spouted in jerks as from an artery of moderate size. Nearly an ounce escaped in all, and the hæmorrhage was arrested by the pressure of a graduated compress of lint. I shall refer to this again. On the 23d November it was reported that the patient had had no pain since the last operation, and that the heart's action under the influence of the veratrum viride was calm. On examining the tumor on that day it was found to be less firm and more prominent, and in the center there was distinct pointing, and the skin in this situation had a deep brownish-red tint. The fifth operation was peformed on this day. One needle was used, which was introduced into the central part of the tumor, the point of the needle being immediately opposite the part which was pointing. Six cells were used, and the operation was continued thirty minutes. Burning heat was complained of, but this was relieved as before by the application of iced cloths. After the operation the pulse was 85, and the heart's action excited, but this was relieved by the administration of ten minutes of the tincture of veratrum viride. On the 1st of December the tumor was observed to be much more prominent and pointing most distinctly, and the discoloration of the skin had much extended. Galvano-puncture was performed for the sixth time; six cells being used for fifty minutes. On the 10th of December my assistant, Dr. Strother, being summoned to the patient, found that there was a slight oozing of bloody serum from the most prominent part of the tumor. It was arrested by the application of collodion. On the 14th of December the seventh and last operation was performed. Three needles, which were not insulated, were used on this occasion, all in connection with the positive pole, the needles being inserted so that the points were opposite the most prominent part of the swelling. Six cells were used, and the operation was continued for an hour. During the operation there was a slight oozing of blood, owing to the displacement of the collodion. On the 15th of December, at half-past four o'clock in the morning, a considerable stream of blood was observed to be flowing down the chest, having separated the collodion covering. The whole tumor was

enveloped in narrow strips of lint, soaked in collodion. Over these, strips of gutta-percha tissue were placed and sealed up with chloroform, which for the time arrested the bleeding. Next morning, at half-past seven, the patient became very weak and vomited. Dr. Strother placed his hand upon the tumor in order to give it support, and while the patient was retching something distinctly gave way, and he exclaimed, "There it is!" This was followed by a gush of blood on all sides, which quickly saturated the sheet and pillows, and for a time he was pulseless. The hæmorrhage was again arrested as before, and the vomiting ceased. After the administration of iced champagne the patient rallied a little, but from time to time the bleeding recurred, and he sank, exhausted and insensible, on the 18th of December, at 10:30 a. m.

On post mortem examination, the surface of the body presented nothing remarkable, with the exception of a dark prominent mass, which protruded from the skin immediately above the supra-sternal notch, and inclined a little to the left side. It had an oval shape, and measured about three inches from above downwards, and two inches across. Its surface was very irregular, and it was evidently composed of coagulated blood. It was found to communicate, by an aperture in the skin, measuring two inches from above downwards, and one inch across, and about the level of the thyroid gland, with an aneurism of the aorta. The heart was very much enlarged, the left ventricle in particular being hypertrophied and dilated. Owing to the way in which it was thought right to remove the parts, its exact weight could not be ascertained, but it probably weighed from twenty to twenty-two ounces. Numerous calcareous plates were found in the aortic arch, which was somewhat wider than natural. A very large, sacculated aneurism sprang from the upper surface of the transverse portion of the arch, with which it communicated by an apperture large enough to admit two fingers, and situated just before the giving off of the large vessels, none of which were directly involved in it. The aneurism was somewhat oval in shape, its long axis, directed from above downwards, measuring between five and six inches. It lay in front, and a little to the left of the larynx and trachea, which it forced slightly backwards and to the right, but it did not seem seriously to interfere with these parts. Although the large vessels were not at their origins involved in the aneurism, the left carotid and subclavian were found to be firmly adherent to, and in part imbedded in, the walls of the sac, while the innominate was only very slightly attached to it. The sac was almost completely filled with old and recent clots, and at one place, almost in the middle of the sac, and in a line with one of the needle punctures, there was a very distinct stratified coagulum which was much paler and firmer than the rest. The other organs of the body were healthy."

This lecture is of great interest, both in a scientific and practical point of view, and merits the attentive consideration of the profession. We cannot avoid, however, impugning what, in two instances, we believe to be inaccuracies. Dr. Anderson tells us that "in a case in Dr. Scott Orr's wards, in which I lately per-

formed galvano-puncture, there was *dilatation* of the pupil from pressure upon the sympathetic." Now, we can understand how dilatation of the pupil may arise from *irritation* of the sympathetic, owing to the proximity of an aneurismal tumor: but simple compression of the sympathetic would have quite the contrary effect. It would cause contraction of the pupil. As far back as the close of 1851, M. Claude Bernard made public the results of his experiments on the effects of section of the cervical sympathetic; one of the most marked of these being the permanent contraction of the pupil. Even as far back as 1727, Pourfour du Petit fully established the fact that the radiating fibers of the iris are under the influence of the sympathetic system, or, in other words, that the sympathetic acts as a simple conductor in transmitting an influence seated in that portion of the medulla spinalis, extending from the first to the sixth dorsal vertebra, which portion has been termed by Budge, the *cilio-spinal region*. But more recently Bernard determined accurately the region from which the sympathetic derives its influence upon the pupil, and is of opinion that it resides in the portion of the medulla included within the two first dorsal pairs; and that it is transmitted to the ganglionic system more especially by the anterior branch of the second pair. Banks (*Dublin Hospital Gazette*, 1856) relates a case of aneurism of the aorta, in which there was a permanent contraction of the left pupil from compression. Hane, in 1838, Gairdner, (*Monthly Journal of Medical Science*, Feb., 1853), and Williamson in 1857, all proved the same effect of compression of the sympathetic in aneurism of the aorta. Somewhat further our author observes, "In a good many cases there is pressure upon the recurrent nerve; but in this one, although the patient was hoarse, there were none of the usual symptoms of pressure upon it; there was no paralysis of the vocal cords." Here we are disposed to draw the very opposite inference from the circumstance of hoarseness as stated. We would consider it as an indication of partial pressure, or pressure limited to one or other recurrent. Where there is compression of both recurrents, we expect to find complete aphonia.

Traube (*Deutsche Klinik*, 1860, No. 41, and 1861 No. 27) has published two cases of this disease, in which the larynx was examined by means of the laryngoscope. In one the voice was

not entirely lost, and paralysis was limited to the left recurrent. When the patient would pronounce the letter e, the left vocal cord remained immovable. In the other case there was complete aphonia; the glottis was largely dilated; the left vocal cord was altogether immovable; the right slowly approached the median line. Mere feebleness of voice in aortic aneurism generally depends on pressure on the trachea; but where there is hoarseness, or complete aphonia, there is compression of one or other recurrent, or of both at the same time.

We may seem to be hypercritical in thus adverting upon what will seem as blemishes, trifling though they be, in comparison with what otherwise is, in a high degree, deserving of commendation, but we trust we are governed solely by a sense of what is due to just criticism—in demanding the pointing out of defects equally with the praise of excellence.

The remaining lectures are valuable, and will amply repay perusal. We regret that space compels us to draw our strictures to a close, and we take leave of the author on this occasion, in recommending his work as an excellent guide either for student or practitioner. W. G. D.

LESSONS IN LARYNGOSCOPY, INCLUDING RHINOSCOPY AND THE DIAGNOSIS AND TREATMENT OF DISEASES OF THE THROAT. By Prosser James, M. D., M. R. C. P., etc. Second edition, with colored plates. Baillière, Tindall and Cox, London, 1878.

This is a small book of 176 pages, the first edition of which was issued in 1873. The author has not thought it necessary to revise the text for the second edition, but has merely added several colored plates, which represent with considerable accuracy various conditions of the larynx, and will be of benefit to beginners. The work is freely illustrated with wood-cuts, which, owing to careful descriptions, answer their purpose well, and the author's style is so simple and lucid that his instructions may readily be understood by the student.

The author, after a brief history of laryngoscopy, describes the various instruments and apparatus required, and the proper methods of using them. He then describes the normal laryngeal image, and in the fourth chapter points out the difficulties which

the laryngoscopist has to encounter, and gives plain and simple directions for overcoming them.

Then follows a more minute description of the larynx and the various modes of demonstration, all of which is rendered intelligible even to the tyro. In the eighth chapter Rhinoscopy is considered, and in the tenth the Practical Use of Laryngoscopy in diagnosis and treatment of the various diseases of the vocal organ.

This little work is the most valuable guide we have seen for the student of laryngoscopy, and we can heartily recommend it. Its excellencies are many, and its defects unimportant, though we confess that the wood-cuts and press-work are the poorest we have ever seen in a medical work. It is very unfortunate that a work so well written should have appeared in such a shabby dress.

NINTH ANNUAL REPORT OF THE STATE ROARD OF HEALTH OF MASSACHUSETTS. January, 1878.

Besides a great many statistics and reports of local interest, this volume contains a few papers which it is a pity to bury in a book of such limited circulation.

Dr. J. F. A. Adams, of Pittsfield, gives the description and plans of "Cottage Hospitals," as they have been established in many country places in England ever since 1859.

Professor Wm. Ripley Nichols contributes a lengthy article on the "Filtration of Potable Water." In regard to artificial filtration on a large scale, the following conclusions are arrived at:

1. No other material has yet been brought into practical use for artificial filtration on a large scale, except sand.

2. With our present knowledge, we have no evidence that sand filtration can be regarded as an efficient means of purification of *polluted* water; although it may, if properly carried out, lessen the liability of ill effects.

3. All visible suspended particles, and an appreciable proportion of organic matter actually in solution, may be removed by properly conducted filtration through sand.

4. For the present, at any rate, it will be best to regard arti-

ficial filtration mainly as a means for the removal of *suspended* matter.

The so-called method of natural filtration consists in drawing the supply from what is known as the ground-water, and is practicable only in localities where the ground-water is of good quality, and free from possibility of pollution.

The most interesting paper in the volume is Dr. B. J. Jeffries' essay on the "Dangers arising from Color-blindness," with especial reference to railroad employés and sailors. Just about one hundred years ago the first cases of color-blindness were made public by Joseph Huddart. In 1794 the English chemist Dalton published an account of his own case, he being red-blind; and ever since red-blindness was called Daltonism. Dr. George Wilson, of Edinburgh, in 1855, in his book on color-blindness, has already referred to the dangers from this defect of vision. He says: "The professions for which color-blindness most seriously disqualifies, are those of the sailor and railroad servant who have daily to peril human life and property on the indication which a colored flag or lamp seems to give. * * * The appalling yearly list of lost vessels awakens the suspicion that more than one of these fatal disasters may have resulted from the mistaken color of a light-house, beacon, or harbor-lamp.

"On railways the danger attending mistakes of signals is much greater than at sea. The most marked peculiarities of the color-blind are shown in mistaking (1) bright red for green, (2) dark red for brown, (3) red for black, and (4) dark or light shades of all colors for each other. The caution signal *green* is thus liable to be mistaken for the danger-signal *red*, and the latter (when it appears black) not to be seen at all."

But Dr. Wilson's voice of warning was not heeded, and his efforts did not bear the fruit they deserved. Twenty-two years later, in 1875, a railroad accident occurred in Sweden, which greatly excited public attention and the evidence of which lead Prof. Holmgren to suppose that color-blindness was one of the principal causes of the disaster. He gave this matter his whole attention, and by untiring efforts succeeded at last, that in 1876 throughout Sweden it was ordered that all the railroad employes should be tested for color-blindness by Holmgren's method. This

method of examination combines simplicity and rapidity with absolute certainty; it consists in the use of worsteds of various colors whereby the person examined does not name the colors, but simply selects them by comparison with the test. By it, a number of eyes can be tested for color-blindness in a relatively short time (about one minute for one person) whilst it does not call for any special intelligence on the part of the person examined.

The magnitude of the danger from color-blindness depends, of course, on the frequency of the defect. In general it may be said that the more accurate examinations of recent date show it to be more frequent than one is generally inclined to think. Dr. Wilson tested altogether 1,154 persons, and found 65, or 5.6 per cent. color blind. Prof. Holmgren found 13 color-blind among 266 railroad employes, or 4.8 per cent. Prof. Dove, of Berlin, reports 40 color-blind men among 860, or 4.6 per cent. Dr. Favre, in France, up to 1855, examined 5,000 candidates for railroad work, and rejected more than 50 for being red blind, and among 224 conductors examined by him, 14 were found decidedly color-blind. Prof. Donders examined 2,300 employes on the Holland roads and found 152 of these color-blind. Dr. Jeffries has recently tested 611 instructors and students of Harvard University, and detected 30 color-blind.

The best proof of the recognition of the great danger from color-blindness is the fact that measures have been recently taken to test men for color-blindness on most of the railroads in Sweden, Denmark, England, France, Germany, Holland, Prussia and Italy. Nothing has yet been done in this country; this whole question was first publicly discussed in 1877, before the Boston Society of Natural History, through the efforts of Dr. Jeffries. Thanks to his persistent labors, we are informed, several railroad companies have already ordered an examination of all their employes for color-blindness. And let us hope that the time will not be far when every railroad company will be compelled by State laws to have every applicant for service examined for color-blindness by an expert and to refuse him if disqualified.

F. C. H.

PRESCRIPTION WRITING. Designed for the use of medical students who have never studied Latin. By Frederic Henry Gerrish, M. D., Professor of Materia Medica and Therapeutics in the Medical School of Maine, etc. Second edition. Portland Me.: Loring, Short & Harman. 1878; pp. 51.

The object of this little book is to give to those who have never studied Latin, what little knowledge of this language is essential to correct prescription writing. It contains such general rules for writing prescriptions, as should be observed, whatever the language may be in which the prescription is written; it shows the variation in Latin words in the different declensions necessary to indicate the possessive and accusative cases; and to illustrate the rules, a few examples are given of prescriptions written in English and translated into Latin, the translation being explained step by step in detail. In the second part of the book are collected all the Latin words used in the United States Pharmacopœia. The nouns and adjectives are classified in five lists according to their declensions; the sixth list contains the indeclinable nouns; list VII gives the numerals and ordinals; list VIII the verbs, and list IX the adverbs, conjunctions and prepositions.

The whole subject of writing prescriptions in Latin is reduced to its smallest possible compass. And as long as the fashion of Latin prescription writing is continued in text-books, journals and practice, so long will this little book prove useful (we dare say indispensable) to a great many American physicians who care to conceal their lack of classical education, and to spare the feelings of medical editors, so often offended by manuscripts bristling with imperfectly written formulæ. F. C. H.

A MANUAL OF NURSING. Prepared for the Training School for Nurses, attached to Bellevue Hospital. New York: Putnam's Sons. Chicago: Jansen, McClurg & Co. Pp. 143; price $1.00.

This little work has been prepared in the hope that it will be useful to those who are earnestly studying to become good and efficient nurses. It contains terse and clear instructions on hospital management, observation of the sick, administration of med-

icine, applications, dressing of wounds, operations, special medical cases, emergencies, monthly nursing, nursing of sick children, hygiene of children, with rules for cooking for the sick, and table of weights and measures.

Many ideas are borrowed from Miss Nightingale's "Notes on Nursing;" also from Miss Lee's "Hospital Sisters," proper credit being given to both of these authors.

The work cannot fail not only to meet the object intended for the class specified, but has in it much to recommend it to the perusal of a still larger class—to the mothers and attendants in homes where poverty denies the admittance of the professional nurse. S. F. B.

VISIONS; A STUDY OF FALSE SIGHT (Pseudopia.) By Edward H. Clarke, M. D. With an introduction and memorial sketch by Oliver Wendell Holmes, M. D. Boston: Houghton, Osgood & Co., 1878; 12 mo. pp. 315.

This is a remarkable book. It is said to be an unfinished essay but most readers would fail to discover the fact in reading the work.

Written while the author was waiting to die of cancer and for occupation during this weary time, notwithstanding the perturbations of mind that must have attended the labor, it appears in the author's most fascinating style and to the end of the book it contains no internal evidence of failing faculties. What a man — what a mind, to have wrought such a work under such circumstances!

The essay is an attempt to find a physiological explanation of pseudopia—false sight—of visions.

Seven instances of the seeing of visions are detailed. In each case the subject was a cultivated and trustworthy person and one also who, while he beheld the unreal object, knew the sight was false, knew it must be only an appearance; in some cases knew or believed the cause to be in his own disturbed brain or body. Having related these examples, the author proceeds to discuss the physiology of sight and dwells at length on the rôle played in this function by the different parts of the cerebral machinery.

The discussion is carried into the field of pathology of this

function and the conclusions arrived at—or some of them—may be fairly represented by a few quotations from the writer's own words:

"Seeing is a matter of the brain and not of the eye; the eye only transmits impressions."

"Human sight is not accomplished till sensory impressions are transformed into ideas and this is done in the hemispheres."

"When this is done—when the organic basis of visual ideas is formed there, seeing takes place, whether there is any corresponding external object or not."

"The brain cells, acting under subjective stimuli, may arrange themselves in such a way as to represent a vision, that is sight, when no external object, corresponding to it, exists."

"A vision is produced whenever the cell-groups, indicating that vision—its hieroglyphic or cypher—are formed in the brain, whether they are formed normally, by the stimulus of light waves from an external object, or abnormally, by a stimulus initiated intra-cranially."

Whether all of the ideas of Dr. Clarke about the details of cerebral physiology are correct we do not need to examine. His notions of the function of the tubercula quadrigemina, of the angular gyri, of the hemispheres, in the physiology of sight, may in the future find themselves far from the accepted doctrines—to-day they would doubtless be questioned by some. But it must be true that normal sight is attended with some change of a peculiar and characteristic kind in the brain. Whether this be called by the name of cell-grouping or by some other, matters little. This admitted, the conclusions of Dr. C., in explanation of visions seem beyond controversy. They are not only correct to-day, but they are of that character that compels the belief that they will be true in the light of the knowledge of the future.

In thus explaining, in a philosophical manner, the appearance of visions, in an essay almost as acceptable and readable to those outside as in the medical profession, our author has done a substantial service to mankind.

The measure of this service is fully understood only when we consider that the explanation of visions is directly or indirectly the explanation of much of the manifestations of modern spiritu-

alism, of trance, somnambulism, and the like. The conclusions of the author prick many of the bubbles of this kind, blown so industriously, and for so long, by a great multitude of very well-meaning spiritualists and believers in modern wonders and miracles, some of whom have gone crazy, or worried their lives away on account of the sights they have supposed they or others have seen. N. B.

ST. BARTHOLOMEW'S HOSPITAL REPORTS, Vol. XIII, 1877, Edited by W. S. Church, M. D., and Alfred Willett, F. R. C. S.

This valuable work presents, as usual, an admirable collection of papers by members of the hospital staff. The volume opens with a paper by Dr. Andrews, "On Presystolic Murmurs at the Heart's Apex," giving at some length the characters of the sound and nature of the lesions which accompany it; subjects upon which the author has some views of his own. The second paper is by Dr. Legg, upon "The Essential Features of Jaundice," in which he describes quite fully the invariable appearances accompanying the disease, the color, the condition of the various secretions, changes in the blood, the fæces, and the urine with its various and varying constituents and tests for the same; the pathology of the disease is hardly touched upon, still less its ætiology. References to its literature are copious, and some rare cases are mentioned. The paper is a valuable one.

Mr. Leach gives some "Brief Notes on the Outbreak of Scurvy in the late Arctic Expedition," being a summary for the Blue Book containing the testimony elicited during the admiralty examination, into the causes thereof and circumstances attending it. The crews of the "Alert" and the "Discovery" started on their long expedition exceptionally well prepared; yet sixty of them were seized with scurvy and four died. Most of those attacked were addicted to intemperance, while at the same time insufficient supply of lime-juice and living in close quarters below deck had much to do with the spread of the disease.

Mr. Kesteven contributes two papers; one (illustrated) entitled "Further Histological Researches on the Pathology of the Nervous System," the other on the "Structure and Functions of the

Olivary Bodies." The first is for the most part a lucid description of certain changes—atrophic and degenerative—in the nervous elements and blood vessels of the nervous system. He holds, with Key and Retzius, that the peri-vascular spaces are not normal; that dilatation of a vessel will induce absorption or sclerosis of its surrounding nervous substance, and that after death the vessels, being no longer distended, contract and thus seem to be lying in these spaces. He also doubts whether the vascular endothelial proliferation described by Heubner as well as the 'miliary degeneration,' can be regarded as pathognomonic of syphilis. His description of the olivary bodies is clear and concise; he regards them as associating the functions of the fifth, eighth and ninth nerves, with whose nuclear origins they are so closely connected.

Dr. Gee furnishes three papers. One "On Chronic Pneumonia Attending Disease of the Tracheal and Bronchial Glands," with four cases; one on "Spastic Paraplegia," with four cases; and "A Contribution to the History of Polydipsia," giving a brief but interesting account of two cases of congenital and and inherited diabetes insipidus, the disease having run through four generations.

Mr. Champneys describes a case of "Extroversion of the Bladder, in a Female Child," which he makes a text for an extended account of the malady, its anatomy and ætiology, with a bibliography of the subject. The same author gives also a "Case of interstitial Fibromyoma of the Uterus," which complicated pregnancy and labor. This paper is rendered more interesting by the same resort to the literature of the subject that characterized his first.

Dr. De Havilland Hall contributes an important paper "On Fribinous Exudation in the Bronchial Tubes." He reports a case of plastic or fibrinous bronchitis, and writes at some length summarizing our knowledge, or rather ignorance concerning its pathology and treatment.

Dr. Legg reports some "Cases Bearing on Diseases of the Liver," including a case of supposed "movable liver," two cases of cirrhosis in children, and one case of primary, melanotic

cancer. He appends a bibliography of his subjects, which adds largely to the value of the report.

Papers are contributed by Dr. Godson "In a Case of Paroxysmal Hæmaturia;" by Mr. Vernon on "Intolerance of Light;" by Mr. Butlin on "Fatty Tumors in Infancy and Childhood." Mr. Hussey reports a case of "Aneurism in the Gluteal Region," which was operated upon and which finally died of exhaustion and complications.

Mr. Albert Doran has an illustrated article on "Complete Intra-peritoneal Ligature of the Pedicle in Ovariotomy." He favors cutting off such ligatures close to the knot, and proves from pathological specimens that such practice is unattended with danger.

Mr. West furnishes a report of a number of medical cases, including one on "Hypertrophic Cirrhosis," which is accompanied by a lithograph of the microscopic appearances. Surgical reports are furnished by Mr. Holden on a case of "Aneurism of the Right Subclavian," for which amputation at the shoulder was performed without avail; by Mr. Eve, of a case of "Fracture through the Odontoid Process," with a collection of similar cases (eleven) gleaned from the literature of the subject; and by Mr. Baker, on "The Formation of Synovial Cysts in the Leg in Connection with Disease in the Knee-joint," which title explains itself. Dr. Duckworth in a paper on "The Ætiology of Mitral Stenosis," combats the idea that rheumatism is necessarily an essential factor, not more than 60 per cent. of his cases having such an origin. Cases are reported by Mr. Kidd, Mr. Abercrombie and Mr. Darbishire, which we have not space to notice. One of the most valuable of all the papers is "On the Albuminous Substances which occur in the Urine in Albuminuria," by Dr. Brunton and Mr. Power, which is a positive contribution to our knowledge of this subject. We regret that we cannot even sum up the authors' general results.

To the above are appended the proceedings of the Abernethian Society, including a learned address by Dr. Gee, and an interesting paper on "Delirium" by Dr. Verco.

The volume closes with elaborate statistical tables of patients

under treatment, which are models in their way. The illustrations are all good, and the work fully up to the standard.

R. P.

THE IDENTIFICATION OF THE HUMAN SKELETON; A Medico-legal Study. To which was awarded the prize of the Massachusetts Medical Society for 1878. By Thomas Dwight, M. D., of Boston, late professor of anatomy at the medical school of Maine. Boston: David Clapp & Son, printers, 1878. Octavo, pp. 54.

This is an ably written essay. The subject of which it treats is presented in a clear, concise way and with a judicial fairness and care that must give to it an important place as a guide in any legal investigation wherein the identification of the human skeleton is an important question. The work embodies a fair compilation from authors on the subject—whose conclusions are discussed, but it acquires its chief value from the records of the numerous careful measurements of skeletons which the author has himself made. It is illustrated by a number of graphic drawings, some of which represent an actual scale in centimeters. We are glad to see this, for if we are to be compelled to learn the metric system, as now seems to be the case, the more we are familiarized with the new measures the better.

N. B.

LANDMARKS, MEDICAL AND SURGICAL. By Luther Holden, F. R. C. S., etc. From the second English edition. Philadelphia: Henry C. Lea. 1878; pp. 128.

This little book, originally dedicated to the students of Saint Bartholomew's Hospital, will prove to be a very useful anatomical guide-book to every student and practitioner inasmuch as a thorough knowledge of the anatomical relation of the surface-marks on the human body to deeper-seated structures, is of the greatest practical importance.

F. C. H.

Summary.

Collaborators:

DR. H. GRADLE, DR. L. W. CASE, DR. R. PARK,
DR. R. TILLEY, DR. D. R. BROWER.

PHYSIOLOGY.

CONCERNING WHITE CORPUSCLES.—Burdon-Sanderson.—(*Br. Med. Jour.*, Jan. 12, 1878.)

It is now known that fibrin does not exist *as such* in the blood; but is formed by two elements—fibrino-plastic and fibrinogen. The cause of their union has hitherto been obscure, but Burdon-Sanderson has shown that the disintegration of the white corpuscles furnishes a sufficient cause, and that such disintegration takes place as soon as they leave the blood stream. The experimental proof is this: blood is caught in a tall jar which is surrounded by ice; it remains incoagulated, the red corpuscules sink, the white rise and float on the serum. Examination of the upper layer shows the white corpuscles rapidly undergoing disintegration, breaking up into granules which cohere for a time, but eventually disappear. Further, if these leucocytes be withdrawn coagulation is arrested. At a freezing temperature they may be separated by filtration. The filtrate is then absolutely deprived of power of coagulation until the corpuscles be restored to it.

Prof. Schmidt has seen the first formed filaments of fibrin originate from the granular débris left behind by the migrated corpuscules.

Collin (*Le Progrés Médical*), has studied the rationale of the melanæmia and pigmentation of malarial fever. Parts most in contact with the blood (*e. g.* the vascular walls), enjoy the least

immunity. These deposits are derived indirectly from the red corpuscles which are destroyed in the spleen. The white corpuscles take up the débris of the red ones and with this form the pigmentation. The immigration in such cases is very active. The process is analagous to transportation of coloring matter by the leucocytes when inflammation is studied by the aid of injection of carmine or similar coloring matter.

INFLUENCE OF POSITION ON CIRCULATION. — At a June meeting of the Academy of Medicine (*Br. Med. Jour.*, July 13, 1878), Mr. Lister, at the time a visitor in Paris, gave a demonstration of his views on this subject. He held that in the elevated position of a limb, its anæmia was due neither to gravitation of blood nor to paralysis of the vaso-motors, but to reflex action, caused by depletion of the veins and contraction of the arteries. His demonstration consisted of the application of an elastic bandage to the root of the limb, which was kept in an elevated position for a few moments; the arm was then lowered, and although the bandage was retained in place, the arm continued to present a bloodless appearance; finally, the arm was raised again, the bandage removed, while the member was kept for a time in the same position. The redness was seen to rapidly return, and then the limb to get pale again before the application of the tourniquet. Mr. Lister concluded by showing the practical application of the theory, and the good results that may be obtained by the elevation of parts that are the seat of inflammation; he instanced also the good effect of raising the arms above the head in cases of epistaxis, which produces reflex contraction of the vessels of the arms, and sympathetic contraction of those of the head and face.

PRACTICAL MEDICINE.

FATAL PURPURA FOLLOWING THE USE OF IODIDE OF POTASSIUM.—Mackenzie.—(*Br. Med. Jour.*, June 8, 1878.)

An infant, aged five months, had prescribed for it a mixture containing 0.15 of potassic iodide at a dose, for congenital syphilis. Three quarters of an hour after taking the first dose the

child's face was noticed to "turn black." The extravasations rapidly and visibly increased in size, the eyelids closed, the face and chin were tensely swollen, a few spots appeared on the arms and legs, and after sixty-eight hours the babe was dead.

The autopsy showed necrosis of the purpuric spots on the face, and syphilis and ulceration of the intestines. But a single dose had been taken.

The author thought it would be necessary to review what was known of syphilitic and iodic purpura. His opinion of this case was that while there was undoubted syphilitic dyscrasia; the fatal purpura was due to the iodide.

SURGERY.

SURGICAL CASES FROM A PHONOGRAPHIC REPORT OF A CLINICAL LECTURE. Lewis A. Sayre. (*Virgin. Med. Monthly.* May, 1878.)

CASE I.—*Spondylitis of Cervical Vertabræ.*—This is the little girl whom you saw last Wednesday. She had been sick for two years, and had not walked for two months and a half. It is a case of spondylitis, or Pott's disease, effecting the cervical vertebræ. You remember we placed a plaster-jacket and jury-mast upon her last Wednesday; but after the lecture she complained of its uncomfortableness, which was sufficient proof that we did not do our work well. The jury-mast was placed a little too low down, so that its arch pressed upon the projecting portion of the spine. Dr. Vanderpool, the house surgeon, at once re-applied the jacket, raising the jury-mast a little, and now, as you see, she is able to walk without pain, though she is yet very weak.

This patient was brought in to illustrate the fact that mistakes in treatment are liable to be made even by those who have had considerable experience with similar cases, a fact which should serve as a warning to us when we are tempted for want of time, or other reasons, to dispatch patients too hastily. Whenever I make a mistake of this kind I learn something by it, and when-

ever it occurs in the treatment of my clinical patients, I bring them before you again, that we may learn a lesson together.

CASE II.—*Chronic Inflammation of the Knee Joint—Amputation at the Joint—Mark's Artificial Leg—Hudson's Extensor.*—The patient who is now presented was first brought to this clinic a year ago. She has suffered since childhood from a chronic inflammation of the knee-joint. When only a few months of age she received an injury to the knee which gave rise to an inflammation that continued up to one year ago, at which time she was eleven years old. At that time her leg was luxated backwards behind the condiles of the femur and partially rotated outward. The deformity was due to reflex muscular contraction excited by the inflammation in the knee-joint. Numerous sinuses lead to dead bone, and from the exhausted condition of the patient, due to excessive discharges, no relief could be given except by exsection of the knee-joint or amputation. Exsection was out of the question, from the fact that the leg and foot had not been sufficiently developed to give the limb length enough to be of use, and therefore amputation was the only thing to be done. The question then came up, whether the amputation should be at the joint or in the shaft of the femur? Although several sinuses lead to necrosed bone in different portions of the femur, and one to the superficial portion of the patella, yet I decided to amputate at the knee-joint in preference to going through the shaft of the femur. From the exhausted condition of the child, I feared that section through the shaft would result in osteo-myelitis. The superficial necrosis of the femur, it was thought, could be successfully treated by the use of drainage tubes. I decided to perform Dr. Stephen Smith's operation, which, for the knee-joint, is preferable to all other operations. It leaves the cicatrix entirely behind, while the patella, *in situ*, acts as a firm basis of support for walking. The result in this case, as you see, justifies my decision.

Mr. Marks has been so kind as to present this little girl with one of his artificial legs, so that she is now able to walk about with freedom and comfort. There is one deficiency with the leg which she wears—she cannot extend it; there is nothing to take the place of the quadriceps extensor muscle. To obviate this defect we will have one of Dr. Hudson's extensors applied to the

leg, which consists of an elastic band on either side of the leg plying over a portion of a wheel representing the quarter of a circle.

CASE III.—*Chronic Inflammation of the Knee-Joint, Complicated by Fracture of the Femur.*—This is a case which has been previously presented to you, of inflammation of the knee-joint, complicated by a fracture of the femur. There was deformity with fibrous anchylosis, the deformity being partially due to the fracture of the femur at the epiphysis. The fracture occurred when the patient was four years of age, but it was not recognized, owing to the fact that the inflammation which immediately followed, involved the knee-joint to such an extent as to direct all attention to the joint. She was treated constitutionally for white swelling of the knee-joint for several years, and finally recovered with her leg flexed at an acute angle and rotated outward, which was her condition, if you remember, at the time of the operation nine weeks ago. At that time, after breaking up the fibrous anchylosis at the knee, we experienced some difficulty in re-fracturing the femur, but fortunately succeeded in breaking it at exactly the point of original fracture, and placing the limb in perfect position. Extention was *immediately* applied, and Dr. Cuddeback, my assistant, dressed the limb with a plaster-of-Paris bandage. Sufficient compression was made with a wet sponge over the lower third of the femoral artery to cut off a portion of the supply of blood to the part, as is my usual custom after *brisement forcé* of the knee-joint, thus materially lessening the chances of inflammation. At that time, I told you we would be satisfied if, with the limb in position, we succeeded in getting anchylosis both at the point of fracture and at the joint. No constitutional or irritative fever followed the great violence which we did to the joint, and this I attribute largely to the immobile dressing which was used, and to the partial occlusion of the artery. We removed the dressing three days ago, and found that perfect consolidation had taken place at the point of fracture; fortunately, however, things had not proceeded so far at the joint. We therefore gave it slight passive motion, which has been repeated every day since that time, and now, as you observe, she is capable of walking without support, and has considerable

motion at the knee-joint, which can be materially increased by the faithful administration of the tincture of time and essence of patience, together with elbow grease and palm oil, technically called *massage*. If the pain produced by manipulation in such cases as this, lasts more than twenty-four hours, the manipulation has been too severe or too protracted.

On account of the atrophy which exists in the affected limb, making it a little shorter than the other, it will be requisite to place about two thicknesses of sole-leather upon the bottom of the shoe worn on this foot in order to equalize the length of the two extremities. By so doing she will be able to walk without limping.

CASE IV.—*Double Talipes Equino-Varus with Luxation of Knee.*—Dr. Forest, of this city, has kindly brought a very interesting case of double talipes equino-varus with luxation of the knee. There is paralysis of the posterior muscles; and the quadriceps extensor contracting, bends the knee-joint exactly opposite to the normal direction. The deformity thus resulting resembles in fact, what it was first thought to be, a fracture of the epiphysis of the lower extremity of the femur.

We will seize the limb and bend the knee out in the proper direction. When we attempt to bring the *foot* into its normal position, before the deformity has been completely reduced, the foot becomes white, due to the obstruction to the circulation. If the foot were retained in this position, it would slough; if left alone, it would return to its abnormal position and become more and more crooked. The rule is, after manipulation of the foot, to retain it in a position as nearly normal as possible without interfering with free circulation. For the fixation of the foot, adhesive plaster or sole-leather dipped in cold water may be used. Great stress should be placed upon the thorough and careful manipulation of the deformed foot, to be repeated as often as possible by the attendants, for there is no mechanical appliance which can be substituted that has the adaptability of the human hand. I have now, during the short space of time which the patient has been before you, manipulated both feet to such an extent that I can place them in very nearly their normal position, where they will be retained to await further manipulation.

CASE V.—*Result of a Case of Exsection of the Hip-Joint.*—George Brown, the young man now presented to you, is twenty-four years of age. When six years old, he received an injury to his hip from a fall. This gave rise to an inflammation in the hip-joint of a chronic character. Sinuses were formed on the outer and upper portion of the thigh, which discharged freely, and the patient became reduced to a skeleton. I removed the head, neck and trochanter major, and gouged the acetabulum on January 28, 1865, in this room. He was placed in the wire breeches, and removed to his home on the same day of the operation. He has recovered, as you see by his running up and down the steps and walking about the amphitheatre, with almost perfect motion. There is about one-half inch shortening. He is a large, strong and vigorous man, capable of doing a full day's work upon the farm, and has no inconvenience whatever from the limb.

CASE VI.—*Necrosis and Abscess of the Tibia.*—This man had the lower end of his right tibia removed seven years ago. He has been walking about since that time, but has never completely recovered. In all probability, there is dead bone within. This is one of those cases which Dr. Markoe describes as *progressive sinuous abscess of the bone.* That the pus burrows its way along, is simply due to the fact that the abscess has not been opened at the most dependent point. If the opening be made at the lowest point at first, no further burrowing will take place.

In this case we have a pocket which retains the pus, the pus burrowing its way through the tissues. We will now proceed to drill through the bottom of this sac, and place therein a drainage tube, which will prevent the possibility of the retention of the products of inflammation, until nature has had time to exfoliate the dead bone; in the meantime, the patient can attend to his business without any difficulty whatever. The process of exfoliation may sometimes be hastened materially by the prompt removal of the greater portion of the dead bone, where the necrosis is extensive.

CASE VII.—*Necrosis and Chronic Inflammation of the Tibia.*—This man had a portion of his tibia removed twenty-two years ago, but there was a little dead bone left which had given rise to

an inflammation of a chronic character. One month ago, his leg measured fifteen inches in circumference; it now measures twelve and a half inches in circumference. I drilled holes through the leg and put in tubing, which was followed by a pretty sharp hæmorrhage. There is now some motion. The great point in the treatment of these cases is to establish free drainage in a downward direction, and thus prevent the retention and absorption of pus. If you have a free external outlet for the pus which is formed within, there is no trouble. Get rid of all the dead bone if you can by mechanically removing it; if not, get rid of a portion of it, and see that there is free drainage. By probing, I find that there is a good-sized piece of dead bone which could be removed with advantage to the patient, and thus save time and materially hasten the process of exfoliation. The external opening which leads to this dead bone should be dilated with a sponge-tent, after which, with the forceps, this large, necrosed portion may be quickly removed. The other portions of dead bone may be easily removed by picking them to pieces with a silver probe. We have now succeeded in drilling a hole through the bone, and after passing this large probe, will draw a drainage tube through the opening thus made, which will afford a free outlet to the pus.

CASE VIII.—*Sacro-Iliac Disease—Differential Diagnosis from Hip-Joint Disease.*—I now present you with a case which was sent to me through the kindness of Dr. Hunt, of New Jersey, and which was supposed to be a case for exsection of the hip-joint. Dr. Hunt first saw the patient (colored) two weeks ago, but no satisfactory history of the case has been obtained. All the information which I have been able to obtain has been from the patient himself since his arrival at the hospital. He states that he is eighteen years of age; that two years ago he suffered from what might be called a general rheumatic fever. He has been exposed to wet, but under what conditions and to what extent was not ascertained.

As yet no satisfactory diagnosis has been made, and it is for the purpose of arriving at some definite conclusion in reference to this interesting and obscure case, that I have brought it before you.

When I first saw him three days ago, he was sitting up in bed, and occupied the exact position which a patient in the second stage of hip-joint disease usually occupies; that is, with the leg flexed upon the thigh, the thigh upon the trunk, the foot everted, and the limb *abducted.*

We will now apply Nélaton's test for displacement of the head of the femur, which consists in passing a line from the anterior-superior spinous process of the ilium to the tuberosity of the ischium. A line thus drawn will pass, when there is no displacement, exactly over the apex of the trochanter major, which we find to be the course of the line in this case. Now, if we had a fracture of the neck of the femur, the trochanter would be above this line; if absorption of the neck, head or acetabulum, the trochanter would also be above this line; the leg would be *adducted*, inverted and shortened. The position which the patient occupied when I first saw him, was sitting with his left leg flexed, abducted and rotated outward, which is the position of a limb when the hip-joint is over-distended, as with pus or serum. Further, in hip-joint disease, if the capsule of the joint be not ruptured, you cannot invert the toe, adduct the limb, or extend the thigh, without producing a great deal of pain. But in this case, taking care not to affect parts external to the joint by the motion of the limb, and to hold the pelvis absolutely still, we can invert the toe, and slowly adduct and extend the limb without causing pain. This would go to show that it was not the hip-joint which was involved, or else that the capsule of the joint has been ruptured, and the effusion into the joint squeezed out. Yet this can hardly be the case, for as we look at the limb, we see that it occupies the position common to the *second* stage of hip-joint disease. If the capsule of the joint had been ruptured or perforated so as to liberate the pus, the limb would no longer retain its present position, but would assume the position common to the *third* stage of hip-joint disease. Now, the limb can get in this position from muscular contraction, but if the deformity be due to muscular contraction, we can invert the leg and rotate it in, which movements we find can be effected in this case. This fact alone has satisfied me that there is no distention of the joint.

You probably will have observed that in making our examination we have avoided, ar far as possible, all sources of irritation and excitement to the patient, for when these patients become irritated, it is almost impossible to do anything with them. As he lies quietly on his couch, we may make some further observations. Our object is to elicit the exact location of the disease. By the application of Nelaton's test line, we have found that the trochanter major is in its normal position. I can crowd the head of the femur firmly into the acetabulum without causing pain. And, again, the leg is too long, and its position too good for a carious head of the femur, or carious acetabulum. You will observe that so long as we confine our examination to the hip-joint proper, our manipulations give rise to no pain; but when we crowd the ilii together with only a slight force, great pain is produced. By passing my thumb around the sacro-iliac junction, I elicit severe pain, and upon the inside I find a fullness which is indicative of a sacro-iliac abscess which has burrowed its way along down the thigh. In my examination of the patient three days ago, the pus broke out on the left side at the upper portion of the thigh. Nearly a half pint escaped, and so strongly was it impregnated with the odor of fæcal matter, that at first I took it to be a portion of the contents of the large intestine, but further examination proved this not to be the case. The matter discharged must have lain for a long time in contact with the rectum, and have derived its odor from the fæces through the principle of osmosis. I am happy to state that Dr. Stephen Smith agrees with me as to the probability of this cxplanatory conjecture.

It is painful to witness the extreme suffering of this man; but to-day he is far more comfortable than when I first examined him.

Many of the symptoms which we have elicited from this patient this afternoon are present in cases of hip-joint disease, but it has been our aim to show you how they are to be differentiated from those of true hip-joint disease. If I make firm pressure over the iliac fossa on the right side I get no pain, but pressure in the same situation on the left side gives rise to extreme pain. Now observe what I am doing. Extension of the femur gives the

patient ease; so it does in hip disease, but you will observe that I am extending the ilium through its attachments to the femur. I am making extension upon the sacro-iliac junction, and that is where the disease exists. As soon as I cease to make extension the patient is in agony, but so long as the extension is applied he is at ease. By placing my left hand over the superior crest of the ilium and pulling with great force, thus drawing the ilium from the sacrum, great relief is afforded the patient. While holding the ilium away from the sacrum, I am crowding the head of the femur firmly into the acetabulum, which gives rise to no pain, and settles the question that there is no disease of the hip-joint.

We have spelt out this case, as it were, and can now easily arrive at a correct diagnosis. We have found in our examination that so long as we do not affect parts external to the hip-joint, our manipulations give rise to no pain. With the sacro-iliac articulation extended, we can make firm compression over the trochanter major without producing pain. When the ilia are crowded together, intense pain is produced. Here, then, we have a clear case of *sacro-iliac disease*, which has gone on to suppuration, and the pus has found its way along down under Poupart's ligament, and come out upon the anterior portion of the thigh.

With reference to the treatment of this case, the first step of essential importance is that a free outlet for the imprisoned pus should be made, and the parts cleansed thoroughly. For this purpose, we will make a free incision along the anterior portion of the thigh were the pus has accumulated, rinse the cavity out with carbolic wash, fill it with Peruvian balsam, and stuff in some oakum. Had the abscess opened posteriorly over the sacro-iliac articulation, I would have made a free incision down to the joint, and laid open fully any sinuses leading to dead bone, removing at the same time any accessible portions of necrosed bony tissue. By placing this patient in the upright posture, the chances for drainage will be greatly improved, and the antiseptic applications which we have made will tend to bring about a more healthy state of affairs.

In the treatment of these cases of sacro-iliac disease, I have recommended extension. During the time when the patient is in

the erect posture, extension is to be made by increasing the thickness of the sole of the shoe which is worn on the foot of the unaffected side to such an extent as will permit the foot of the affected side to swing clear of the ground, and thus extension upon the sacro-iliac articulation will be made by the weight of the limb on the affected side. The extending force may be further increased by running lead into the sole of the shoe on the affected side. This method of extension is intended only to be used while the patient is exercising on his crutches. At night, and whenever resting in the horizontal posture, extension is to be kept up by a weight and pulley over the foot of the bed. The foot of the bed is to be raised a few inches higher than the head of the bed, by means of which the body acts as a counter-extending force. In my work on *Orthopœdic Surgery*, I have probably not been as explicit with reference to this part of the treatment as I should have been, and therefore some persons have imagined that I intended to keep the patient in the erect posture day and night until recovery took place. But I there stated that the same principle of treatment has to be carried out in dealing with sacro-iliac disease as was used in the treatment of hip-joint disease, which implied extension and counter-extension by means of a weight and pulley over the foot of the bed whenever the patient was lying down. However, I have not been understood, for Dr. McGuire, in the *Virginia Medical Monthly* for January, 1878, has thus misunderstood me. The abscess of the anterior portion of the thigh is now opened freely, and a large amount of very offensive pus with a distinct fæcal odor is escaping.

I have just made out another important point in this case. By introducing my finger through the incision which has been made to liberate the pus, I can pass it up and about the capsule of the joint which I find to be unruptured. This confirms our exclusion of the hip joint from disease.

We now inject the cavity with carbolized water, and having thoroughly washed it out, fill it with Peruvian balsam. We elevate the limb, so that the disinfecting balsam may come freely in contact with all parts internally. We will stuff in some oakum, cover the part with oil silk, and over this apply a roller bandage. Extension must be made as we have already sug-

gested. The patient should have a pair of crutches, so that he can get out into the open air and sun-light. He should have a sustaining diet.

REMOVAL OF GRAVEL FROM THE BLADDER.—By M. Dubuc. (*L'Union Médicale*, July 23, 1878.) M. D. presented to the Société de Médecine de Paris specimens of gravel—uric acid crystals—which the patient had been able to extract himself. He was a man 80 years of age, who had been operated upon—lithotrity—in 1867 and again in 1876. Convinced that he had to expect a renewal of the difficulty unless some means were adopted to prevent the accumulation, he, the patient, resolved to use aspiration in thoroughly emptying the bladder.

In 1877, M. D. exhibited to the society some uric acid crystals thus removed that were four millimeters in diameter. He exhibited, on the occasion in question, about fifty in number, and some of them six millimeters in diameter. The patient had not suffered from an attack of renal colic for more than twenty-five years, although he was constantly passing these uric acid crystals. He was in the enjoyment of excellent health.

The aspiration was at first practiced once a day, and then gradually reduced to once in six days. The instrument used was simply a glass syringe.

In the course of discussion on this subject, M. Mercier described the following method of accomplishing the same work. Previous to micturition the patient is requested to lie flat on his belly. After a few minutes of repose in this position, he rises slowly on all fours, and whilst in this position, is requested to pass his water. The object is to remove by their specific gravity the gravel from the cul-de-sac and force them along with the current.

PLASTER OF PARIS DRESSING FOR TRANSVERSE FRACTURE OF PATELLA.—Reported by M. Droullon, service of Dr. Denis-Dumont. (*L'Année Médicale, July*, 1878.)

The history of the case which gave use to the following plaster of Paris dressing runs thus:

Mr. V., a railroad worker, received a kick on the 28th of May,

1876, in the front part of right knee; began to run to avenge himself but found that he was helpless, not being able to extend his right leg. He went to the Hospital Lisieux; a dressing of dextrine was applied and on the 4th of September, 1876, he left the hospital cured.

He then walked, in order to get home, twenty-eight kilometers. In the evening, without any perceptible sudden pain, he perceived that the formerly united fragments were again separated, and he was utterly unable to carry the leg forward.

A fortnight later, 20th of September, he entered the Hôtel-Dieu de Caen. In consideration of the history it was thought the union would be accomplished with difficulty, and the following plaster of Paris dressing was devised.

Materials used: Two bands of tarlatan—twenty-four thicknesses—six centimeters wide—eighty long. Two pieces of strong tape two centimeters wide and fifty long. A steel buckle attached to a rubber strap from fifteen to twenty centimeters long. Half a litre of plaster of Paris.

Mode of application: The plaster being properly mixed, one of the bands of tarlatan is well saturated with it and placed round the lower part of the thigh—the leg being slightly flexed—so as to form a ring, placed obliquely from before backwards, and from above downwards; the lower border of the ring must adapt itself well to the upper border of the upper half of the patella, whilst behind, it passes down obliquely into the popliteal space. Whilst adapting this band the two pieces of strong tape must be well inserted between the folds of the tarlatan one in the middle behind, so that the free end may hang down towards the leg; the other similarly situated in front.

The second band is prepared in much the same way. The direction, however, must be different, namely the obliquity will be from below upwards and from before backwards. The upper part of the band must be snugly adapted to the lower border of the lower half of the patella. During its application the loose piece of tape, in the upper ring behind, must be incorporated in the band, and the buckles attached to the rubber bands must be inserted in front just opposite the center of the lower border of the patella and opposite the tape inserted in the upper ring.

The plaster being dry, the leg is extended and the two fragments are brought slowly together, the distances being slowly decreased according to the judgment of the surgeon.

In the case in question, the parts were not brought together until the fourth day. On the 15th of October the parts had somewhat diminished in size and a fresh application was made. This remained in place till the 10th of February, 1877.

The patient was discharged on the 14th of March with a slight stiffness in the joint. When seen in December last, all traces of the accident had disappeared.

TREATMENT OF ERYSIPELAS BY HYPODERMIC INJECTIONS OF CARBOLIC ACID. By Herman Hueter. (*Berl. Klin. Wochenschrift*, No 24, 1878.)

At the surgical clinic in Greifswald, subcutaneous injections of carbolic acid in traumatic erysipelas have been in use during the past year. In order to get along with the least quantity of the drug, great care is taken to attack the disease in the beginning. After every febrile attack in cases of wounds the parts are kept under observation and within some hours the diagnosis of erysipelas is usually established by a reddening of the edges of the wound. The wound is now thoroughly cleansed with carbolic acid, or if the appearance is unfavorable, with a five to eight per cent. solution of chloride of zinc. The solution used for hypodermic injections consists of carbolic acid and alcohol, ana 1.5, water 50 grams. One syringeful (1 C. C.) of this fluid diffuses itself under the skin to the extent of about one half the size of an ordinary card. For repeated injections the needle may be left in place, since the solution spreads very easily. While ordinarily three to eight C. C. have sufficed, Hueter has injected as much as twelve syringes without accident. By surrounding the entire border of the erysipelatous patch with a ring of fluid in the subcutaneous tissue, a further progress of the disease is at once checked. If the patch is large, a second series of injections within its borders, may be necessary, whereupon a speedy return to the normal pallor of the skin shows the disappearance of the disease. No better test of the efficacy of this method could be desired, than the repeated observation, that where the points of

injection were too far apart, the erysipelatous inflammation continued to extend in a peninsular shape between the protected portions.

Where red, hard cords indicate the existence of a lymphangitis, a thorough application of mercurial ointment along their tracks was found most servicable. For internal treatment there is rarely any call for this method.—*Allg. Med. Central Zreit. No.* 53–54–55, 1878.

Ophthalmology.

Incrustations of Lead upon Cornea and Conjunctiva. (*Journ. de Médecine, Nov.* 1877.)

In an article on visual troubles due to lead-poisoning, published in the *Recueil d' Ophthalmologie*, M. Galezowski, insists upon these latter accidents being due almost always to the use of collyria containing salts of lead in solution. These lotions are dangerous whenever the cornea or conjunctiva are ulcerated, the amorphous lead being precipitated upon the entire surface of the ulcer, where it is soon covered by a thin pellicle of epithelium which prevents its expulsion.

Lead deposits in the cornea are of most frequent occurrence, and give rise to the most inconvenience; those of the conjunctiva are less frequent and do not interfere with vision; they are usually the result of insufflations of powdered acetate of lead for ganular conjunctivitis.

Lead spots of the cornea present the form, usually, of chalky-white or pearl-colored opacities with well-defined borders. They are speedily covered with an epithelial pellicle which gives the surface a shining appearance. They are of little importance, except in so far as they occupy the central portion of the transparent membrane, when they require surgical intervention. Desmarres removes the incrustation by scraping with the triangular knife of Baer. M. Galezowski engages the knife flatways under the opacity and passes it between the transparent cornea and the opacity, gradually, until the latter is removed. The operation,

though painful, is not difficult. The pellicle is hard enough, usually, to allow it to be removed in one piece, and the wound left is even, shining, and cicatrizes perfectly without leaving a trace, and without a new opacity.

GLAUCOMA AND INCREASED OCULAR TENSION.—From a recent summary in the *Dublin Jour. of Med. Sci.* (June, 1878), we take the following:

Papers have been published by Knies and Weber to the effect that the chief factor in this affection is interference with the drainage of the eye. The former insists that the obliteration of the canal of Fontana plays an important rôle; and the latter concludes that in all forms of the disease the drainage channels become narrowed and finally occluded.

Recently Dr. Stilling has experimented by ligaturing the optic nerve. At first this was followed by neuro-paralytic symptoms; after five or ten days there took place enormous increase of tension, anæsthesia of the cornea and increased fluidity of the vitreous.

He would divide the malady into—glaucoma anticum—due to obstruction of the anterior drainage system as well as Fontana's canal; and glaucoma posticum—depending on obstruction in the vascular sheath of the optic nerve.

Mr. Brailey, of London, has found marked and universal changes in the ciliary body, the circular fibers being specially affected or almost completely atrophied. He closes thus: "It is extremely likely that the ciliary muscle has functions besides that of accommodation, and that it may be concerned in regulating the blood supply. This might explain the effect of an atrophied ciliary muscle in passively keeping up an increased tension, notwithstanding that the periphery of the iris has never been united to the cornea.

THE last words of Velpeau: *Il faut toujours travailler, mes amis.* (My friends, we must ever be working.)

Items.

INDIANA, ILLINOIS AND KENTUCKY TRI-STATE MEDICAL SOCIETY.—The fourth annual meeting of this society, will be held in the city of Springfield, Ills., November 13, 14 and 15, 1878, commencing at 11 a. m., 13th.

Extract from plan of organization.—"All members in good "standing of any local, county, district or State medical societies, "auxiliary to the American Medical Association, may become "members on payment of the fees and a vote of the society.

G. W. BURTON, M. D., Secretary, Mitchell, Ind.

B. M. GRIFFITH, M. D.,
Chairman Com. Arrangements, Springfield, Ills.

THE "ANNUAL CIRCULAR AND CATALOGUE OF THE COLLEGE OF PHYSICIANS AND SURGEONS, city of Keokuk, Iowa," an affair of eight pages, is again before us. From it we learn that "J. C. Hughes, M. D.," is President of the Board of Curators, Professor of the Institutes and Practice of Surgery and Surgical Clinics (sic), Dean of the Faculty, and also Surgeon-in-charge of the Medical and Surgical Infirmary and Eye and Ear Institute. "J. C. Hughes, Jr., M. D.," is Professor of Anatomy, and, also, as appears from an advertisement on the eighth and last page of the "Circular and Catalogue," has "a large and complete assortment of surgical instruments. Orders promptly attented (sic) to." Four other gentlemen make up the list of professors, two of them, we are told, are now in Europe, but will return "ripe with experience and ready to impart all the old, and everything new which their observation may add as an improvement in the departments over which they preside."

We make the following excerpta from this "Circular and Catalogue" without comment: "Years of experience has (sic) proved the great advantage of extemporaneous lectures." . . . "Board can be obtained in the city at from $2.00 to $4.00 per week, *owing to the accommodations!*" "Text-books: *Cruvilhier* (!), *Aitkin* (!), *Erichson* (!), *Rockatansky* (!), *Cazeau* (!)."

The announcement of the spring session for 1879 lacks its verb. In the name of Hippocrates and Galen, let us pray that it will lack nothing more! Fees for the Course, $20.00!

LOCUST OIL.—Analysis and examination of the dead Rocky Mountain locusts by the United States Entomological Commission show that these insects furnish a new oil which will be christened *caloptine*, and a very large percentage of pure formic acid. Though this acid exists in the ant and some other insects, it is with difficulty obtained in large quantities; whereas by the action of sulphuric acid upon the locust juices, it passes off with great readiness, and in remarkable quantity and gravity. The various uses of this acid as a therapeutic, etc., are capable of great and valuable extension, where it can be obtained so readily, and in such quantity.—*Druggists' Circular.*

THE introductory lectures to the regular winter courses of the medical schools in this city are announced as follows: For the Chicago Medical College, by Dr. Wm. E. Quine, on the evening of the 1st inst.; for the Woman's Hospital Medical College, by Dr. W. Godfrey Dyas, on the evening of the 2d inst.; for Rush Medical College, by Dr. James Nevins Hyde, on the evening of the 1st inst.

WE have received the printed inaugural dissertations of two Milwaukee physicians, presented for the degree of the doctorate in the Ludwig-Maximilian University, of Munich; one, that of our correspondent, Dr. Nicholas Senn, on the subject of Varicocele; the other, that of Dr. Alois Grætinger, on Placental Arrest after Labor at Term.

ANNOUNCEMENTS FOR THE MONTH.

SOCIETY MEETINGS.

Chicago Medical Society—Mondays, Oct. 7 and 21.
West Chicago Medical Society—Mondays, Oct. 14 and 28.

CLINICS.

MONDAY.

Eye and Ear Infirmary—2 p. m., Ophthalmological, by Prof. Holmes; 3 p. m., Otological, by Prof. Jones.
Mercy Hospital—1:30 p. m., Surgical, by Prof. Andrews.
Rush Medical College—2 p. m., Dermatological and Venereal, by Dr. Hyde; 3 p. m., Medical, by Dr. Bridge.
Woman's Medical College—2 p. m., Dermatological, by Dr. Maynard.

TUESDAY.

Mercy Hospital—1:30 p. m., Medical, by Prof. Hollister.

WEDNESDAY.

Chicago Medical College—1:30 p. m., Eye and Ear, by Prof. Jones.

THURSDAY.

Eye and Ear Infirmary—2 p. m., Ophthalmological, by Dr. Hotz.
Chicago Medical College—1:30 p. m., Medical, by Prof. Quine.

FRIDAY.

Mercy Hospital—1:30 p. m., Medical, by Prof. Davis.

SATURDAY.

Rush Medical College—2 p. m., Surgical, by Prof. Gunn.
Chicago Medical College—2 p. m., Surgical, by Prof. Isham; 3 p. m., Neurological, by Prof. Jewell.

Daily Clinics, from 2 to 4 p. m., at the Central Free Dispensary, and at the South Side Dispensary.